DRAFT Technical Memorandum

Contaminant Screening Study

Post Clean-Up Evaluation Sampling

Libby Asbestos Site, Operable Unit 4, Libby, Montana

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Acronyms

AHERA	Asbestos Hazard Emergency Response Act
ASTM	American Society for Testing and Materials
CDM	CDM Federal Programs Corporation
CE	Post Clean-Up Evaluation
EPA	U.S. Environmental Protection Agency
FSDS	field sample data sheet
GO	grid opening
HEPA	high efficiency particulate air filter
ISO	International Organization of Standardization
LA	Libby amphibole
MCE	mixed cellulose ester
mm	millimeter
PIF	pre-interview form
QAPP	Quality Assurance Project Plan
QC	quality control
SAP	sampling and analysis plan
SRC	Syracuse Research Corporation
S/cm^2	structures per square centimeter
S/cc	structures per cubic centimeter
TEM	transmission electron microscopy

Section 1
Introduction

This document is a technical memorandum that describes the field activities, sample collection procedures, and sample results of the post clean-up evaluation sampling program. All field procedures are detailed in the Final Sampling and Analysis Plan (SAP) Addendum, Post Clean-Up Evaluation (CE) Sampling (CDM Federal Programs Corporation [CDM] 2003).

This section provides background information related to the CE sampling and describes the objectives of the CE sampling.

1.1 Background

Because of the potential threats posed to public health by contamination resulting from vermiculite mined in Libby, Montana, the Environmental Protection Agency (EPA) is currently taking a number of clean-up actions intended to reduce the potential for Libby amphibole (LA) asbestos releases from primary and secondary sources, including:

- Removal of indoor vermiculite insulation at locations where the insulation is subject to disturbance (primary source)
- Removal of outdoor soils that contain LA asbestos at concentrations higher than 1 percent by mass (primary source)
- Removal of indoor dust at locations where LA asbestos loading is greater than or equal to 5,000 Asbestos Hazard Emergency Response Act (AHERA) structures per square centimeter (S/cm^2) (secondary source)

In addition, EPA is providing high efficiency particulate air filter (HEPA) vacuum cleaners to residents where removal actions were performed. Residents are instructed to use the HEPA vacuums to help reduce and/or eliminate reintroduction of LA asbestos in indoor dust at their properties.

Following each clean-up, confirmation sampling occurs by collecting samples of indoor air using aggressive sampling methods. The aggressive sampling methods include sweeping the floors, ceiling and walls using a leaf blower to dislodge any remaining dust prior to sample collection and placing stationary fans in the area during the sample period to ensure disturbance of remaining dust is maintained thought the sampling period. A property is not declared to be acceptable unless the site-specific clearance rule (in the living areas each of approximately 5 samples of disturbed air on the level(s) or floor(s) cleaned are below the detection limit of the AHERA transmission electron microscopy [TEM] method [AHERA 2002]; and in attics 5 LA structures are allowed over 5 samples analyzed by the AHERA TEM method) is satisfied. Thus, the short-term efficacy of the actions is well-established.

However, a number of important questions remain regarding the longer-term efficacy and permanence of the cleanup.

1.2 Objectives

The objectives of the post clean-up evaluation sampling program was to obtain data that would

- Determine the magnitude of the reduction in exposure level due to the cleanup
- Determine the residual exposure levels of residents in homes after cleanups have been completed
- Determine if residual sources such as dust inside air ducts and furnaces or in carpets and upholstery cause re-contamination of indoor dust in a home, and if so, is that of concern

All data collected as part of the CE, was collected under normal living conditions (i.e., not during household remodeling or other activities that would generate larger than normal dust), with the exception of the sampling conducted at 143 Crossway Ave and 2297 Kootenai River Rd. Remodeling activities were occurring at both these properties during CE sample collection.

Section 2
Field Activities

This section summarizes the CE field activities of property selection, pre-CE sampling activities, collection of samples, and any deviations in field activities from the documents that governed the CE sampling. The CE sampling program was comprised of three main steps:

- Selection of properties to be sampled
- Pre-CE activities (scheduling CE sampling, pre-interview and meeting)
- Collection of CE samples (ambient air, personal air, and dust)

2.1 Selection of Homes to be Sampled

Selection of homes to be sampled was based on the following criteria:

- Interior cleaning must have occurred – this could be a vermiculite insulation removal, an interior cleaning due to elevated dust results, or both.
- Homes that use forced air heating were preferred. As there are a limited number of homes in the area that use forced air heating, homes that use radiant heating were also sampled.
- Homes where vermiculite was left in place (i.e., walls, crawl spaces, sub-floors).
- Properties that were cleaned up early in the project or more recently.
- Properties where an interior cleaning was conducted due to high dust results, but carpeting was not removed.
- Properties that in addition to an interior clean-up had significant exterior contamination removed.

Table 2-1 is a summary of the 31 homes were CE sampling was conducted and how each property relates to the above criteria.

2.2 Pre Clean-Up Evaluation Activities

This section describes the pre CE activities that included contacting home owners regarding participation in the CE activities, scheduling CE sampling, and conducting pre CE interviews and meetings.

Table 2-1 Summary of Post Clean-Up Evaluation Sampling Properties Showing Relation to Selection Criteria and Clean-Up Evaluation Samples Collected

	Clean-Up Evaluation Selection Criteria							Clean-Up Evaluation Sampling Details					
									Ambient Air				
Property	Indoor Removal Activities	Type of Heat Distribution	Location of Vermiculite Left in Place	Date of Removal	Interior Cleaning Due to Dust Result >5,000 S/cm², Carpeting Cleaned but Not Removed		Significant Exterior Contamination Removed	Date of Clean-Up Evaluation Sampling	Basement	Ground Floor	Second Floor	Personal Air	Dust (Number with total cm² collected)
					Reason for Interior Cleaning	Carpet Cleaned or Removed							
1108 Louisiana Ave	Exterior only	Forced Air	None	September 2003	No interior cleaning occurred		Yes	1/30/2004	2**	1	1	0	1 @ 600 cm²
1109 Louisiana Ave	VCI removal	Radiant	None	March 2003	No interior cleaning occurred		No	12/15/2003	1	1	NA	0	1 @ 400 cm²
1116 Utah Ave	VCI removal	Radiant	Attic	March 2003	No interior cleaning occurred		No	12/16/2003	1	1	1	0	1 @ 400 cm²
1118 California Ave	VCI removal	Radiant	None	March 2003	No interior cleaning occurred		No	1/19/2004	0	1	0	0	1 @ 400 cm²
1120 California Ave	VCI removal	Forced Air	None	March 2003	No interior cleaning occurred		No	1/20/2004	0	2**	0	0	1 @ 600 cm²
113 W. Oak St	VCI removal with interior cleaning	Forced Air	Walls	November 2003	Dust result >5,000 S/cm²	Cleaned	Yes	1/21/2004	1*	1*	NA	0	1 @ 400 cm²
1202 Idaho Ave	VCI removal with interior cleaning	Radiant	Walls	December 2003	VCI in living space	Cleaned	No	1/29/2004	NA	1	NA	0	1 @ 400 cm²
1212 Louisiana Ave	VCI removal with interior cleaning	Radiant	None	March 2003	VCI in living space	Cleaned	No	1/12/2004	NA	1	1	0	1 @ 400 cm²
123 Hamann Ave	VCI removal with interior cleaning	Radiant	Unknown	October 2002	Dust result >5,000 S/cm²	Removed	Yes	1/29/2004	NA	1	1	0	1 @ 400 cm²
1231 Nevada Ave	VCI removal	Forced Air	Walls	October 2003	No interior cleaning occurred		No	1/26/2004	NA	1	NA	0	1 @ 400 cm²
1306 Louisiana Ave	VCI removal with interior cleaning	Forced Air	Walls	April 2003	VCI in living space	Cleaned	No	12/15/2003	NA	1	NA	0	1 @ 400 cm²
1417 Washington Ave	VCI removal with interior cleaning	Forced Air	Walls	October 2003	Dust result >5,000 S/cm²	Cleaned	No	1/26/2004	NA	1	1	0	1 @ 400 cm²
143 Crossway Ave	VCI removal with interior cleaning	Forced Air and Radiant	Walls and Crawl Space	July 2003	VCI in living space	Removed	Yes	12/08/03 12/09/03 12/10/03	NA	1*	1	2 - 1/day for 2 days	1 @ 400 cm²
154 Ski Rd	VCI removal and interior cleaning	VCI removal	Walls	Interior - 11/02 Exterior - 7/03	Cleaned prior to criteria established - Dust results <5,000 S/cm2 and no VCI in living space	Removed	Yes	1/13/2004	1	1	1	0	1 @ 600 cm2
178 Scenery Rd	VCI removal	Radiant	None	March 2003	No interior cleaning occurred		No	12/17/2003	2**	1	NA	0	1 @ 400 cm²
2129 Highway 2 S	VCI removal with interior cleaning	Radiant	Ceiling, Walls	May 2003	VCI in living space	Cleaned	No	1/23/04 1/24/04	NA	1	1	0	1 @ 400 cm²
214 W. Larch St	VCI removal with interior cleaning	Radiant	Walls	May 2003	VCI in living space	Cleaned	No	2/2/2004	NA	1	NA	0	1 @ 400 cm²
2293 Kootenai River Rd	VCI removal with interior cleaning	Forced Air	Walls, Sub-floor	October 2003	Dust result >5,000 S/cm²	Removed	Yes	11/20/03 12/15/03	1	1	1	1*	1 @ 400 cm² and 1 @ 600 cm²
2297 Kootenai River Rd	VCI removal with interior cleaning	Forced Air	Walls	October 2003	Dust result >5,000 S/cm²	Cleaned	Yes	1/19/04 1/21/04	NA	1	NA	1	1 @ 400 cm²
83 W. Larch St	VCI removal with interior cleaning	Forced Air	Walls	Feburary 2003	Dust result >5,000 S/cm²	Cleaned	No	1/27/2004	1	1	1	0	1 @ 600 cm²
3796 Highway 2 S	VCI removal with interior cleaning	Forced Air	Walls	October 2003	VCI in living space	Cleaned	No	1/16/2004	NA	1	NA	0	1 @ 400 cm²
38 Spencer Hill Way	Interior cleaning	Forced Air	None	September 2003	Dust result >5,000 S/cm²	Cleaned	Yes	1/28/04 1/30/04	NA	1	NA	1	1 @ 400 cm²
450 Farm to Market Rd	VCI removal	Forced Air	None	October 2003	No interior cleaning occurred		Yes	12/18/2003	1	1*	NA	0	1 @ 400 cm²
505 Louisiana Ave	VCI removal	Forced Air	Attic	March 2003	No interior cleaning occurred		No	1/13/2004	NA	1	1	0	1 @ 400 cm²
52 Peart St	VCI removal with interior cleaning	Forced Air	Walls	May 2003	VCI in living space	Cleaned	No	1/16/2004	1	1	1	0	1 @ 600 cm²
603 W. 10th St	VCI removal with interior cleaning	Forced Air and Radiant	None	July 2003	VCI in living space	Cleaned	Yes	12/15/03 12/16/03 12/17/03	3 - 1/day for 3 days	3 - 1/day for 3 days	NA	3 - 1/day for 3 days	1 @ 400 cm²
616 Wisconsin Ave	VCI removal with interior cleaning	Forced Air	Subfloor	May 2003	VCI in living space	Cleaned	No	1/17/2004	1	1	1	0	1 @ 600 cm²
620 Utah Ave	VCI removal	Forced Air	Ceiling	March 2003	No interior cleaning occurred		No	1/8/2004	NA	1	1	0	1 @ 400 cm²
653 Flower Creek Rd	Interior cleaning	Radiant	None	October 2003	Dust result >5,000 S/cm²	Cleaned	Yes	1/16/2004	1	1	NA	0	1 @ 400 cm²
713 Michigan Ave	VCI removal with interior cleaning	Forced Air	Attic	May 2003	VCI in living space	Cleaned	No	1/12/2004	NA	1	1	0	1 @ 400 cm²
86 Paliga Dr	Interior cleaning	Radiant	None	August 2003	Dust result >5,000 S/cm²	Cleaned	Yes	1/23/2004	1	1	NA	0	1 @ 400 cm²
										66		8	32

* - Samples with detects of Libby Amphibole (LA)
**1 field sample and 1 field replicate sample collected from this location
NA - Property does not contain that floor
Properties where LA was detected

2.2.1 Scheduling Clean-Up Evaluation Activities

Once a list of potential properties meeting the criteria detailed in Section 2.1 was compiled, CDM community involvement personnel began contacting residents in November 2003 to determine which property owners would be willing to participate in the CE sampling.

2.2.2 Pre-Sampling Interview and Meeting

Prior to or during initial sample collection, an interview and meeting was conducted with each resident. The purpose of the interview was to capture information regarding any activities the residents may be involved in or properties routinely visited by the occupants that could reintroduce LA contamination into their home. The interview was documented on a pre-interview form (PIF) (Appendix A). The PIF also captured information regarding the use of EPA provided HEPA vacuums.

A pre-sampling meeting was conducted to provide each resident with information regarding the sampling equipment to be used, and who to contact if there were any issues with the equipment. The pre-sampling meeting was also used to provide the occupants where personal air samples are being collected with instructions on how to complete the activity log (Appendix A). The activity log was used to record the activities of the resident during personal air sample collection.

2.3 Collection of Clean-Up Evaluation Samples

Three types of samples were collected during the CE activities: ambient air, personal air, and dust. CE sampling activities began on November 20, 2003, and continued until February 2, 2004. This section summarizes the collection procedures used, any deviations to the sample procedures, and summarizes the number of samples collected.

2.3.1 Ambient Air Sample Collection

A total of 66 ambient air field samples were collected in 31 homes under normal living conditions in accordance with the Sampling and Quality Assurance Project Plan (QAPP) Revision 1 for Libby, Montana, Environmental Monitoring for asbestos, Baseline Monitoring for Source Area and Residential Exposure to Tremolite-Actinolite asbestos Fibers (EPA 2000), also known as the Phase 1 QAPP. A summary of the samples collected is provided in Table 2-1.

High volume air pumps were used to collect one ambient air sample per floor of the living space. If needed, additional samples were collected depending on the square footage of each floor. Each sample was collected in a centrally located area to avoid interference from outside air.

In order to achieve the desired analytical sensitivity a total air volume between 6,000 and 8,000 liters was pulled through each 25 millimeter (mm) 0.8 micron mixed cellulose ester (MCE) sampling filter at a flow rate that captured this volume in one 10

to 12 hour period. Every two to three hours each sampling filter was checked for loading and the flow rate measured. Due to observed filter loading in homes where the resident is a smoker, uses a wood burning stove, or has indoor pets, some samples were collected at less than 6,000 liters. Due to filter loading a total of 7 samples were collected with a total air volume less than 6,000 liters.

A stationary air field sample data sheet (FSDS) and logbook entries were completed for each sample (included in Appendix A).

2.3.2 Personal Air Sample Collection

A total of 8 personal air field samples were collected in 5 homes under normal living conditions in accordance with the Phase 1 QAPP (EPA 2000). A summary of the samples collected is provided in Table 2-1.

In order to achieve the desired analytical sensitivity a total air volume between 6,000 and 8,000 liters was pulled through a single 25 mm 0.8 micron MCE sampling filter at a flow rate that captured this volume in three 8 to 10 hour periods (3 days). One ambient air sample was collected per floor of the living space each day of personal air sample collection. The ambient air sample was collected at or just above the same flow rate used to collect the personal air sample. This was done to ensure the same volume of air was sampled during the same time period for both the personal and ambient air samples.

Every two to three hours each sampling filter was checked for loading and the flow rate measured. Due to observed filter loading in homes where the resident is a smoker, uses a wood burning stove, or has indoor pets, some samples were collected at less than 6,000 liters. Due to filter loading a total of 8 samples were collected with a total air volume less than 6,000 liters.

During the collection of personal air samples, each resident being sampled completed an activity log (Appendix A) that generally described the activities they conducted while wearing the sampling pump. Residents were instructed that during the time of sample collection they should turn off the pump if they leave their property. If the occupant wearing the pump exited the home but remained outdoors on their property, the sampling included this period of time.

A personal air FSDS and logbook entries were completed for each sample (included in Appendix A).

2.3.3 Dust Sample Collection

A total of 32 dust field samples were collected from 31 homes. A summary of the samples collected is provided in Table 2-1. As detailed in the CE SAP (CDM 2003), dust samples were collected in accordance with the SAP for Indoor Dust, Revision 0, Version 2 (CDM and Syracuse Research Corporation [SRC] 2003), also know as the dust SAP, with the following exceptions:

- One dust sample was collected per house
- Each dust sample was a minimum of a 400 cm^2 composite that was collected over all floors (i.e., basement, ground floor, second floor, etc.)
- For multiple floor homes one 100 cm^2 high traffic area and one 100 cm^2 horizontal surface sample was collected from each floor on a single sample cassette
- For single floor homes two 100 cm^2 high traffic areas and two 100 cm^2 horizontal surfaces were collected from each floor on a single sample cassette
- No dust blanks were to be submitted

A dust FSDS and logbook entry was completed for each sample (included in Appendix A).

Deviations to Dust Sample Collection

- Two dust samples (CE-00001 and CE-00002) were collected at 2293 Kootenai River Rd. Two samples were collected due to the condition of the home at the time of CE sampling. Because the house was being remodeled during the sampling event, one dust sample was collected from the section of the house that was being remodeled and the second sample was collected from portions of the house that were not being remodeled.
- One dust sample (CE-00051) collected at 1116 Utah Ave was collected over a total of 400 cm^2 and should have been collected over a total of 600 cm^2. This deviation occurred as a result of this property being one of the first properties to be sampled during the CE and the incorrect number of dust sampling locations being collected. The two locations that were not included were one 100 cm^2 area from a horizontal surface in the basement and one 100 cm^2 area from a horizontal surface on the ground floor. Based on the assumption that LA distribution is evenly distributed within the living space the smaller area sampled at this property will not affect the quality of this sample result.
- As detailed in Libby Field Office Record of Modification Form LFO-000064a and 64b, the frequency of QC sample collection was changed to the following requirement: one field blank was collected at a frequency of one per team per day and analyzed at a frequency of one per team per week for each media. Three field dust blanks were collected.

Section 3
Results

This section provides a summary of the analytical methods used to analyze the samples collected as part of the CE, the analytical sensitivity of the analytical methods, and a summary of the results.

3.1 Analytical Methods

The CE SAP (CDM 2003) required all air and dust samples collected be analyzed by TEM according to International Organization of Standardization (ISO) Method 10312 (ISO 1995). As documented in Libby Field Office Record of Modification Form LFO-000074 (Appendix B) the analytical method used to analyze the dust and air samples collected during this investigation was changed to the TEM AHERA method, and dust samples were prepared for analysis using American Society for Testing and Materials (ASTM) method 5755. All samples were analyzed at the on-site laboratory in Libby.

3.2 Sensitivity Limits

The minimum detection limits required for air samples collected as part of the CE activities was specified to be 0.0001 structures per cubic centimeter (S/cc) in the SAP (CDM 2003). Due to the large amount of grid openings (GO) that may be required to be read in order to reach this analytical sensitivity, a target analytical sensitivity was established. The target analytical sensitivity of 0.0001 S/cc for personal and stationary air samples was modified to include a not to exceed GO count of 50 GOs. If a sensitivity of 0.0001 S/cc could not be achieved within 50 GOs, the laboratory counted until a target analytical sensitivity of 0.0002 S/cc was reached, or until 50 GOs were read, which ever came first. This deviation is described in Libby Field Office Record of Modification Form LFO-000078 (Appendix B).

The minimum detection limit required for dust samples collected as part of the CE activities was specified to be 500 S/cm^2. This sensitivity was achieved for all samples except one, where the detection limit was reported at 502 S/cm^2.

3.3 Summary of Results

A total of 106 field samples (66 ambient air, 8 personal air, 32 dust) were collected during the CE activities described in this technical memorandum. In addition a total of 6 field blanks were submitted for analysis (3 for air, and 3 for dust), as well as one air field replicate sample. This section and Table 3-1 provides a summary of the results.

3.3.1 Ambient Air Sample Results

Of the 66 ambient air field samples collected during the CE activities, 4 samples showed detects of one structure of LA at each of the following properties:

Table 3-1 Results of Post Clean-Up Evaluation Samples

Sample ID	Property Group (Location)	Sample Group	Location Description (Sub Location)	Media Type	Matrix	Sample Type	Category	Pre Post Clear	Vol (L)/ Area (cm^2)	Sample Date	AHERA / ASTM 5755															
												Libby Amphiboles (LA)				Chrysotile (C)				Other Amphiboles (OA)				Total Asbestos			
											Filter Status Non Analyzed	S<5u	S>5u	Asb load (S/mm2)	Asb conc (S/cc)	S<5u	S>5u	Asb load (S/mm2)	Asb conc (S/cc)	S<5u	S>5u	Asb load (S/mm2)	Asb conc (S/cc)	Asbestos Type Identified	S<5u	S>5u	Asb load (S/mm2)	Asb conc (S/cc)
CE-00121	1109 Louisiana Ave	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	6548	1/30/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00121	1109 Louisiana Ave	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	6589	1/30/2004		0	0	<10.51	<0.0006	0	0	<10.51	<0.0006	0	0	<10.51	<0.0006		0	0	<31.53	<0.0018
CE-00122	1109 Louisiana Ave	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	6589	1/30/2004		0	0	<10.51	<0.0006	0	0	<10.51	<0.0006	0	0	<10.51	<0.0006		0	0	<31.53	<0.0018
CE-00122	1109 Louisiana Ave	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	6589	1/30/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00123	1109 Louisiana Ave	House	Ground floor bedroom	Air	Indoor	Stationary	Field Sample	N/A	6580	1/30/2004		0	0	<10.51	<0.0006	0	0	<10.51	<0.0006	0	0	<10.51	<0.0006		0	0	<31.53	<0.0018
CE-00123	1109 Louisiana Ave	House	Ground floor bedroom	Air	Indoor	Stationary	Field Sample	N/A	6580	1/30/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00124	1109 Louisiana Ave	House	2nd floor, top of steps	Air	Indoor	Stationary	Field Sample	N/A	6571	1/30/2004		0	0	<10.51	<0.0006	0	0	<10.51	<0.0006	0	0	<10.51	<0.0006		0	0	<31.53	<0.0018
CE-00124	1109 Louisiana Ave	House	2nd floor, top of steps	Air	Indoor	Stationary	Field Sample	N/A	6571	1/30/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00125	1109 Louisiana Ave	House	Basement, 2nd level, groundfloor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	600	1/30/2004		0	0	<280.75	<167	23	5	7,300.92	4,685	0	0	<280.75	<167		23	5	<7,822.41	<5,019
CE-00041	1109 Louisiana Ave	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	6076	12/15/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00042	1109 Louisiana Ave	House	Basement	Air	Indoor	Stationary	Field Sample	N/A	6079	12/15/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00044	1109 Louisiana Ave	House	Basement & ground floor HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	12/15/2003		0	0	<130.37	<125	0	0	<130.37	<125	0	0	<130.37	<125		0	0	<391.12	<376
CE-00046	1116 Utah Ave	House	Basement	Air	Indoor	Stationary	Field Sample	N/A	6160	12/16/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00049	1116 Utah Ave	House	2nd level top of steps	Air	Indoor	Stationary	Field Sample	N/A	6162	12/16/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00050	1116 Utah Ave	House	kitchen/dining room	Air	Indoor	Stationary	Field Sample	N/A	6152	12/16/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00051	1116 Utah Ave	House	Basement/ground floor/second level HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	12/16/2003		0	0	<130.37	<125	0	0	<130.37	<125	0	0	<130.37	<125		0	0	<391.12	<376
CE-00078	1118 California Ave	House	Kitchen, hallway	Air	Indoor	Stationary	Field Sample	N/A	6103	1/19/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00079	1118 California Ave	House	Kitchen, hallway	Air	Indoor	Stationary	Field Sample	N/A	6109	1/19/2004		0	0	<10.51	<0.0007	0	0	<10.51	<0.0007	0	0	<10.51	<0.0007		0	0	<31.53	<0.0018
CE-00080	1118 California Ave	House	Ground floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/19/2004		0	0	<325.93	<314	0	0	<325.93	<314	0	0	<325.93	<314		0	0	<977.80	<941
CE-00082	1120 California Ave	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	5715	1/20/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00082	1120 California Ave	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	5716	1/20/2004		0	0	<10.51	<0.0007	0	0	<10.51	<0.0007	0	0	<10.51	<0.0007		0	0	<31.53	<0.0018
CE-00083	1120 California Ave	Basement	Basement	Air	Indoor	Stationary	Field Replicate	N/A	5716	1/20/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00083	1120 California Ave	Basement	Basement	Air	Indoor	Stationary	Field Replicate	N/A	5716	1/20/2004		0	0	<10.51	<0.0007	0	0	<10.51	<0.0007	0	0	<10.51	<0.0007		0	0	<31.53	<0.0018
CE-00086	1120 California Ave	House	Basement, ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	600	1/20/2004		0	0	<325.93	<209	0	0	<325.93	<209	0	0	<325.93	<209		0	0	<977.80	<627
CE-00087	113 W. Oak St	House	Ground level master bedroom	Air	Indoor	Stationary	Field Sample	N/A	6258	1/21/2004		0	1	2.42	0.0001	0	0	<2.42	<0.0001	0	0	<2.42	<0.0001		0	1	7.27	0.0004
CE-00088	113 W. Oak St	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	6240	1/21/2004		0	1	2.42	0.0001	0	0	<2.42	<0.0001	0	0	<2.42	<0.0001		0	1	7.27	0.0004
CE-00089	113 W. Oak St	House	Basement, ground floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/21/2004		0	0	<434.56	<418	0	0	<434.56	<418	0	0	<434.56	<418		0	0	<1,303.74	<1,255
CE-00113	1202 Idaho Ave	House	South sewing room	Air	Indoor	Stationary	Field Sample	N/A	6095	1/29/2004		0	0	<10.51	<0.0007	0	0	<10.51	<0.0007	0	0	<10.51	<0.0007		0	0	<31.53	<0.0020
CE-00113	1202 Idaho Ave	House	South sewing room	Air	Indoor	Stationary	Field Sample	N/A	6095	1/29/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00114	1202 Idaho Ave	House	GF HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/29/2004		0	0	<260.75	<251	0	0	<260.75	<251	0	0	<260.75	<251		0	0	<782.24	<753
CE-00032	1212 Louisiana Ave	House	Kitchen	Air	Indoor	Stationary	Field Sample	N/A	6254	1/12/2004		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00033	1212 Louisiana Ave	House	2nd level hallway	Air	Indoor	Stationary	Field Sample	N/A	6118	1/12/2004		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00035	1212 Louisiana Ave	House	Ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/12/2004		0	0	<130.37	<125	0	0	<130.37	<125	0	0	<130.37	<125		0	0	<391.12	<376
CE-00059	123 Hamann Ave	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	6700	1/29/2004		0	0	<10.51	<0.0006	0	0	<10.51	<0.0006	0	0	<10.51	<0.0006		0	0	<31.53	<0.0018
CE-00059	123 Hamann Ave	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	6700	1/29/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00060	123 Hamann Ave	House	Master bedroom	Air	Indoor	Stationary	Field Sample	N/A	6738	1/29/2004		0	0	<10.51	<0.0006	0	0	<10.51	<0.0006	0	0	<10.51	<0.0006		0	0	<31.53	<0.0018
CE-00060	123 Hamann Ave	House	Master bedroom	Air	Indoor	Stationary	Field Sample	N/A	6736	1/29/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00115	123 Hamann Ave	House	GF & 2nd level HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/29/2004		0	0	<325.93	<314	0	0	<325.93	<314	0	0	<325.93	<314		0	0	<977.80	<941
CE-00104	1231 Nevada Ave	House	Master bedroom	Air	Indoor	Stationary	Field Sample	N/A	6215	1/26/2004		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00105	1231 Nevada Ave	House	Ground floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/26/2004		0	0	<325.93	<314	0	0	<325.93	<314	0	0	<325.93	<314		0	0	<977.80	<941
CE-00043	1306 Louisiana Ave	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	6078	12/15/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00045	1306 Louisiana Ave	House	Ground floor HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	12/15/2003		0	0	<130.37	<125	0	0	<130.37	<125	0	0	<130.37	<125		0	0	<391.12	<376
CE-00046	1306 Louisiana Ave	Blank	BLANK	Air	N/A	Stationary	Field Blank	N/A		12/15/2003		0	0	<3.88		0	0	<3.88		0	0	<3.88			0	0	<11.63	
CE-00101	1417 Washington Ave	House	Kitchen	Air	Indoor	Stationary	Field Sample	N/A	6099	1/26/2004		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00102	1417 Washington Ave	House	2nd level	Air	Indoor	Stationary	Field Sample	N/A	6167	1/26/2004		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00103	1417 Washington Ave	House	Ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/26/2004		0	0	<325.93	<314	0	0	<325.93	<314	0	0	<325.93	<314		0	0	<977.80	<941
CE-00106	1417 Washington Ave	Blank	NA	Air	N/A	Stationary	Field Blank	N/A		1/26/2004		0	0	<3.88		0	0	<3.88		0	0	<3.88			0	0	<11.63	
CE-00004	143 Crossway Ave	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	1962	12/8/2003		0	0	<0.76	<0.0001	0	0	<0.76	<0.0001	0	0	<0.76	<0.0001		0	0	<2.28	<0.0004
CE-00005	143 Crossway Ave	House	Dining room	Air	Indoor	Stationary	Field Sample	N/A	7231	12/8/2003		1	0	2.75	0.0001	0	0	<2.75	<0.0001	0	0	<2.75	<0.0001		1	0	8.24	0.0004
CE-00006	143 Crossway Ave	House	2nd level, master bedroom, doorway	Air	Indoor	Stationary	Field Sample	N/A	7246	12/8/2003		0	0	<2.75	<0.0001	0	0	<2.75	<0.0001	0	0	<2.75	<0.0001		0	0	<8.24	<0.0004
CE-00007	143 Crossway Ave	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	3194	12/8/2003		0	0	<1.24	<0.0001	0	0	<1.24	<0.0001	0	0	<1.24	<0.0001		0	0	<3.72	<0.0004
CE-00008	143 Crossway Ave	Blank	NA	Air	N/A	Stationary	Field Blank	N/A		12/10/2003		0	0	<3.85		0	0	<3.85		0	0	<3.85			0	0	<11.54	
CE-00009	143 Crossway Ave	House	Ground floor & 2nd floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	12/10/2003		0	0	<431.24	<415	0	0	<431.24	<415	0	0	<431.24	<415		0	0	<1,293.71	<1,245
CE-00038	154 Ski Rd	House	2nd level west bedroom	Air	Indoor	Stationary	Field Sample	N/A	6037	1/13/2004		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00037	154 Ski Rd	House	Ground level living room	Air	Indoor	Stationary	Field Sample	N/A	6122	1/13/2004		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00036	154 Ski Rd	House	Center of basement	Air	Indoor	Stationary	Field Sample	N/A	6140	1/13/2004		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00062	154 Ski Rd	House	Basement, ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	600	1/13/2004		0	0	<260.75	<167	0	0	<260.75	<167	0	0	<260.75	<167		0	0	<782.24	<502
CE-00052	178 Scenery Rd	House	kitchen	Air	Indoor	Stationary	Field Sample	N/A	6161	12/17/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00053	178 Scenery Rd	Basement	Bedroom	Air	Indoor	Stationary	Field Sample	N/A	6161	12/17/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00054	178 Scenery Rd	Basement	Bedroom	Air	Indoor	Stationary	Field Replicate	N/A	6161	12/17/2003		0	0	<2.35	<0.0001	0	0	<2.35	<0.0001	0	0	<2.35	<0.0001		0	0	<7.05	<0.0004
CE-00055	178 Scenery Rd	House	Basement, ground floor HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	12/17/2003		0	0	<260.75	<251	0	0	<260.75	<251	0	0	<260.75	<251		0	0	<782.24	<753
CE-00090	2129 Highway 2 S	House	2nd level	Air	Indoor	Stationary	Field Sample	N/A	6556	1/24/2004		0	0	<2.50	<0.0001	0	0	<2.50	<0.0001	0	0	<2.50	<0.0001		0	0	<7.50	<0.0004
CE-00091	2129 Highway 2 S	House	Living room ground level	Air	Indoor	Stationary	Field Sample	N/A	6520	1/24/2004		0	0	<2.50	<0.0001	0	0	<2.50	<0.0001	0	0	<2.50	<0.0001		0	0	<7.50	<0.0004
CE-00094	2129 Highway 2 S	House	Ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/23/2004		0	0	<260.75	<251	0	0	<260.75	<251	0	0	<260.75	<251		0	0	<782.24	<753
CE-00118	214 W. Larch St	House	Kitchen	Air	Indoor	Stationary	Field Sample	N/A	6167	2/2/2004		0	0	<10.51	<0.0007	0	0	<10.51	<0.0007	0	0	<10.51	<0.0007		0	0	<31.53	<0.0020
CE-00118	214 W. Larch St	House	Kitchen	Air	Indoor	Stationary	Field Sample	N/A	6167	2/2/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00119	214 W. Larch St	House	Basement/ground level HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	2/2/2004		0	0	<260.75	<251	0	0	<260.75	<251	0	0	<260.75	<251		0	0	<782.24	<753
CE-00001	2293 Kootenai River Rd	House	Basement, ground floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	11/20/2003		0	0	<129.37	<125	0	0	<129.37	<125	0	0	<129.37	<125		0	0	<388.11	<374
CE-00002	2293 Kootenai River Rd	House	Basement, ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	600	11/20/2003		0	0	<431.24	<277	0	0	<431.24	<277	0	0	<431.24	<277		0	0	<1,293.71	<830
CE-00013	2293 Kootenai River Rd	House	Basement finished	Air	Indoor	Stationary	Field Sample	N/A	6750	12/15/2003		0	0	<2.58	<0.0001	0	0	<2.58	<0.0001	0	0	<2.58	<0.0001		0	0	<7.75	<0.0004
CE-00014	2293 Kootenai River Rd	House	Living room unfinished	Air	Indoor	Stationary	Field Sample	N/A	6747	12/15/2003		0	0	<2.58	<0.0001	0	0	<2.58	<0.0001	0	0	<2.58	<0.0001		0	0	<7.75	<0.0004
CE-00015	2293 Kootenai River Rd	House	NW bedroom	Air	Indoor	Stationary	Field Sample	N/A	6898	12/15/2003		0	0	<2.67	<0.0001	0	0	<2.67	<0.0001	0	0	<2.67	<0.0001		0	0	<8.02	<0.0004
CE-00016	2293 Kootenai River Rd	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	4893	12/15/2003		0	1	1.89	0.0001	0	0	<1.89	<0.0001	0	0	<1.89	<0.0001		0	1	5.67	0.0004
CE-00077	2297 Kootenai River Rd	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	4728	1/19/2004		0	0	<1.80	<0.0001	0	0	<1.80	<0.0001	0	0	<1.80	<0.0001		0	0	<5.41	<0.0004
CE-00078	2297 Kootenai River Rd	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	7729	1/19/2004		0	0	<2.98	<0.0001	0	0	<2.98	<0.0001	0	0	<2.98	<0.0001		0	0	<8.94	<0.0004
CE-00081	2297 Kootenai River Rd	House	Ground floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/19/2004		0	0	<325.93	<314	0	0	<325.93	<314	0	0	<325.93	<314		0	0	<977.80	<941
CE-00107	233 W. Larch St	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	6158	1/27/2004		0	0	<10.51	<0.0007	0	0	<10.51	<0.0007	0	0	<10.51	<0.0007		0	0	<31.53	<0.0020
CE-00107	233 W. Larch St	Basement	Basement	Air	Indoor	Stationary	Field Sample	N/A	6158	1/27/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00108	233 W. Larch St	House	Ground level kitchen	Air	Indoor	Stationary	Field Sample	N/A	6158	1/27/2004		0	0	<10.51	<0.0007	0	0	<10.51	<0.0007	0	0	<10.51	<0.0007		0	0	<31.53	<0.0020
CE-00108	233 W. Larch St	House	Ground level kitchen	Air	Indoor	Stationary	Field Sample	N/A	6158	1/27/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00109	233 W. Larch St	House	2nd level hallway	Air	Indoor	Stationary	Field Sample	N/A	6177	1/27/2004	Overloaded	0	0	<0	<0	0	0	<0	<0	0	0	<0	<0		0	0	<0	<0
CE-00109	233 W. Larch St	House	2nd level hallway	Air	Indoor	Stationary	Field Sample	N/A	6177	1/27/2004		0	0	<10.51	<0.0007	0	0	<10.51	<0.0007	0	0	<10.51	<0.0007		0	0	<31.53	<0.0020
CE-00110	233 W. Larch St	House	Basement, ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	600	1/27/2004		0	0	<651.87	<418	0	0	<651.87	<418	0	0	<651.87	<418		0	0	<1,955.60	<1,255
CE-00026	3796 Highway 2 S	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	6073	1/8/2004		0	0	<2.21	<0.0001	0	0	<2.21	<0.0001	0	0	<2.21	<0.0001		0	0	<6.64	<0.0004
CE-00027	3796 Highway 2 S	House	Ground floor HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/8/2004		0	0	<325.93	<314	0	0	<325.93	<314	0	0	<325.93	<314		0	0	<977.80	<941
CE-00028	3796 Highway 2 S	House	blank	Dust	N/A		Field Blank	N/A	0	1/8/2004		0	0	<52.15		0	0	<52.15		0	0	<52.15			0	0	<156.45	

Table 3-1 Results of Post Clean-Up Evaluation Samples

ID	Property Group (Location)	Sample Group	Location Description (Sub Location)	Media Type	Matrix	Sample Type	Category	Pre Post Clear	Vol (Ly Area (cm²)	Sample Date	AHERA / ASTM 5755																	
											Filter Status Non Analyzed	Libby Amphiboles (LA)					Chrysotile (C)				Other Amphiboles (OA)					Total Asbestos				
												S<5u	S>5u	Asb load (S/mm2)	Asb conc (S/cc)		S<5u	S>5u	Asb load (S/mm2)	Asb conc (S/cc)	S<5u	S>5u	Asb load (S/mm2)	Asb conc (S/cc)	Asbestos Type Identified	S<5u	S>5u	Asb load (S/mm2)	Asb conc (S/cc)
CE-00111	38 Spencer Hill Way	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	5279	1/28/2004		0	0	< 10.51	< 0.0008		0	0	< 10.51	< 0.0008	0	0	< 10.51	< 0.0008		0	0	< 31.53	< 0.0023
CE-00111	38 Spencer Hill Way	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	5278	1/28/2004	Overloaded	0	0	< 0	< 0		0	0	< 0	< 0	0	0	< 0	< 0		0	0	< 0	< 0
CE-00112	38 Spencer Hill Way	House	Hallway ground level	Air	Indoor	Stationary	Field Sample	N/A	6999	1/28/2004	Overloaded	0	0	< 0	< 0		0	0	< 0	< 0	0	0	< 0	< 0		0	0	< 0	< 0
CE-00112	38 Spencer Hill Way	House	Hallway ground level	Air	Indoor	Stationary	Field Sample	N/A	6999	1/28/2004		0	0	< 10.51	< 0.0008		0	0	< 10.51	< 0.0008	0	0	< 10.51	< 0.0008		0	0	< 31.53	< 0.0017
CE-00116	38 Spencer Hill Way	House	GF HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/30/2004		0	0	< 260.75	< 251		0	0	< 260.75	< 251	0	0	< 260.75	< 251		0	0	< 782.24	< 753
CE-00117	38 Spencer Hill Way	Blank	Blank	Dust	N/A		Field Blank	N/A	0	1/30/2004		0	0	< 52.15			0	0	< 52.15		0	0	< 52.15			0	0	< 156.45	
CE-00056	450 Farm to Market Rd	House	Hallway connecting living room and bedroom	Air	Indoor	Stationary	Field Sample	N/A	6226	12/15/2003		0	1	2.80	0.0002		0	0	< 2.50	< 0.0002	0	0	< 2.50	< 0.0002		0	1	< 7.50	< 0.0005
CE-00057	450 Farm to Market Rd	House	Basement	Air	Indoor	Stationary	Field Sample	N/A	8217	12/18/2003		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00058	450 Farm to Market Rd	House	Basement & ground floor HS/HTW	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	12/18/2003		0	0	< 260.75	< 251		0	0	< 260.75	< 251	0	0	< 260.75	< 251		0	0	< 782.24	< 753
CE-00039	505 Louisiana Ave	House	Ground level kitchen	Air	Indoor	Stationary	Field Sample	N/A	8082	1/13/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00040	505 Louisiana Ave	House	2nd level @ top of steps	Air	Indoor	Stationary	Field Sample	N/A	8109	1/13/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00061	505 Louisiana Ave	House	Ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/13/2004		0	0	< 260.75	< 251		0	0	< 260.75	< 251	0	0	< 260.75	< 251		0	0	< 782.24	< 753
CE-00085	52 Pearl St	House	Basement bedroom	Air	Indoor	Stationary	Field Sample	N/A	6091	1/16/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00066	52 Pearl St	House	Ground level living room	Air	Indoor	Stationary	Field Sample	N/A	6244	1/16/2004		0	0	< 2.42	< 0.0001		0	0	< 2.42	< 0.0001	0	0	< 2.42	< 0.0001		0	0	< 7.27	< 0.0004
CE-00067	52 Pearl St	House	2nd level hallway	Air	Indoor	Stationary	Field Sample	N/A	6204	1/16/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00068	52 Pearl St	House	Basement, ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	600	1/16/2004		0	0	< 325.93	< 209		0	0	< 325.93	< 209	0	0	< 325.93	< 209		0	0	< 977.80	< 627
CE-00010	603 W. 10th St	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	1737	12/15/2003		0	0	< 1.55	< 0.0003		0	0	< 1.55	< 0.0003	0	0	< 1.55	< 0.0003		0	0	< 4.65	< 0.0010
CE-00011	603 W. 10th St	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	2413	12/15/2003		0	0	< 1.55	< 0.0002		0	0	< 1.56	< 0.0002	0	0	< 1.55	< 0.0002		0	0	< 4.65	< 0.0007
CE-00012	603 W. 10th St	House	Basement	Air	Indoor	Stationary	Field Sample	N/A	2417	12/15/2003		0	0	< 1.55	< 0.0002		0	0	< 1.55	< 0.0002	0	0	< 1.55	< 0.0002		0	0	< 4.65	< 0.0007
CE-00017	603 W. 10th St	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	1928	12/18/2003		0	0	< 1.55	< 0.0003		0	0	< 1.55	< 0.0003	0	0	< 1.55	< 0.0003		0	0	< 4.65	< 0.0009
CE-00018	603 W. 10th St	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	2512	12/18/2003		0	0	< 1.62	< 0.0002		0	0	< 1.62	< 0.0002	0	0	< 1.62	< 0.0002		0	0	< 4.85	< 0.0007
CE-00019	603 W. 10th St	House	Basement	Air	Indoor	Stationary	Field Sample	N/A	2569	12/18/2003		0	0	< 1.65	< 0.0002		0	0	< 1.65	< 0.0002	0	0	< 1.65	< 0.0002		0	0	< 4.85	< 0.0007
CE-00020	603 W. 10th St	House	Basement & ground floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	12/18/2003		0	0	< 521.49	< 502		0	0	< 521.49	< 502	0	0	< 521.49	< 502		0	0	< 1,564.48	< 1,506
CE-00021	603 W. 10th St	House	Shoulder	Air	Indoor	Personal	Field Sample	N/A	1906	12/17/2003		0	0	< 1.55	< 0.0003		0	0	< 1.55	< 0.0003	0	0	< 1.55	< 0.0003		0	0	< 4.65	< 0.0009
CE-00022	603 W. 10th St	House	Basement	Air	Indoor	Stationary	Field Sample	N/A	2499	12/17/2003		0	0	< 1.62	< 0.0002		0	0	< 1.62	< 0.0002	0	0	< 1.62	< 0.0002		0	0	< 4.85	< 0.0007
CE-00023	603 W. 10th St	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	2495	12/17/2003		0	0	< 1.62	< 0.0002		0	0	< 1.62	< 0.0002	0	0	< 1.62	< 0.0002		0	0	< 4.85	< 0.0007
CE-00073	616 Wisconsin Ave	House	Basement	Air	Indoor	Stationary	Field Sample	N/A	6145	1/17/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00074	616 Wisconsin Ave	House	Ground level living room	Air	Indoor	Stationary	Field Sample	N/A	6272	1/17/2004		0	0	< 2.42	< 0.0001		0	0	< 2.42	< 0.0001	0	0	< 2.42	< 0.0001		0	0	< 7.27	< 0.0004
CE-00075	616 Wisconsin Ave	House	2nd level hallway	Air	Indoor	Stationary	Field Sample	N/A	6231	1/17/2004		0	0	< 2.42	< 0.0001		0	0	< 2.42	< 0.0001	0	0	< 2.42	< 0.0001		0	0	< 7.27	< 0.0004
CE-00076	616 Wisconsin Ave	House	Basement, ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	800	1/17/2004		0	0	< 325.93	< 209		0	0	< 325.93	< 209	0	0	< 325.93	< 209		0	0	< 977.80	< 627
CE-00024	620 Utah Ave	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	6074	1/8/2004		0	0	< 1.55	< 0.0001		0	0	< 1.55	< 0.0001	0	0	< 1.55	< 0.0001		0	0	< 4.65	< 0.0003
CE-00025	620 Utah Ave	House	West Bedroom 2nd level	Air	Indoor	Stationary	Field Sample	N/A	6073	1/8/2004		0	0	< 2.21	< 0.0001		0	0	< 2.21	< 0.0001	0	0	< 2.21	< 0.0001		0	0	< 6.64	< 0.0004
CE-00029	620 Utah Ave	House	Ground floor, second level HS/HTA	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/8/2004		0	0	< 260.75	< 251		0	0	< 260.75	< 251	0	0	< 260.75	< 251		0	0	< 782.24	< 753
CE-00063	653 Flower Creek Rd	House	Ground level hallway	Air	Indoor	Stationary	Field Sample	N/A	6217	1/16/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00064	653 Flower Creek Rd	House	Basement-center	Air	Indoor	Stationary	Field Sample	N/A	6186	1/16/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00069	653 Flower Creek Rd	House	Basement, ground floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/16/2004		0	0	< 372.50	< 359		0	0	< 372.50	< 359	0	0	< 372.50	< 358		0	0	< 1,117.49	< 1,078
CE-00070	653 Flower Creek Rd	Blank	NA	Dust	N/A		Field Blank	N/A		1/16/2004		0	0	< 52.15			0	0	< 52.15		0	0	< 52.15			0	0	< 156.45	
CE-00030	713 Michigan Ave	House	Kitchen	Air	Indoor	Stationary	Field Sample	N/A	6127	1/12/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00031	713 Michigan Ave	House	2nd level east room	Air	Indoor	Stationary	Field Sample	N/A	6118	1/12/2004		0	0	< 2.35	< 0.0001		0	0	< 2.35	< 0.0001	0	0	< 2.35	< 0.0001		0	0	< 7.05	< 0.0004
CE-00034	713 Michigan Ave	House	Ground floor, second level	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/12/2004		0	0	< 434.58	< 418		0	0	< 434.58	< 418	0	0	< 434.58	< 418		0	0	< 1,303.74	< 1,255
CE-00082	86 Paliga Dr	Basement	Office	Air	Indoor	Stationary	Field Sample	N/A	6556	1/23/2004		0	0	< 2.50	< 0.0001		0	0	< 2.50	< 0.0001	0	0	< 2.50	< 0.0001		0	0	< 7.50	< 0.0004
CE-00083	86 Paliga Dr	House	Living room	Air	Indoor	Stationary	Field Sample	N/A	6556	1/23/2004		0	0	< 2.50	< 0.0001		0	0	< 2.50	< 0.0001	0	0	< 2.50	< 0.0001		0	0	< 7.50	< 0.0004
CE-00085	86 Paliga Dr	House	Basement, ground floor	Dust	Horizontal surface & high traffic area		Field Sample	N/A	400	1/23/2004		0	0	< 325.93	< 314		0	0	< 325.93	< 314	0	0	< 325.93	< 314		0	0	< 977.80	< 941

Sample with LA detected

113 W. Oak St - each of two ambient air samples (CE-00087 and CE-00088) had detects of one structure, both with LA concentrations of 0.0001 S/cc each.

- 143 Crossway Ave - one ambient air sample (CE-00005) had a detect of one structure with a LA concentration of 0.0001 S/cc. Remodeling activities were occurring in this home during CE sample collection.
- 405 Farm to Market Rd - one ambient air sample (CE-00056) had a detect of one structure with a LA concentration of 0.0002 S/cc.

All other samples were nondetect for LA, chrysotile, and other amphiboles.

3.3.2 Personal Air Sample Results

Of the 8 personal air field samples collected during the CE activities, one sample (CE-00016) collected at 2293 Kootenai River Rd showed one structure of LA (at a concentration of 0.0001 S/cc). Remodeling activities were occurring in this home during CE sample collection. All other samples were nondetect for LA, chrysotile, and other amphiboles.

3.3.3 Dust Sample Results

All of the 32 dust field samples collected were nondetect for LA. One sample (CE-00125) collected at 1108 Louisiana Ave showed a chrysotile concentration of 4,685 S/cm^2. Chrysotile contamination is not a result of the presence of vermiculite at a property.

3.3.4 Quality Control Sample Results

As stated in the Final SAP Addendum, Post Clean-Up Evaluation Sampling (CDM 2003), quality control requirements detailed in Section B5 of the Phase 1 QAPP (EPA 2000) were to be followed for air samples collected during the CE activities. These requirement require the collection of replicate air samples at a rate of 1 per 20 (5%), and the submission of field blanks at a rate of 1 per 20 (5%). As stated in the CE SAP (CDM 2003), no quality control (QC) samples were required for dust samples collected during the CE activities.

A total of three replicate air samples (all nondetect for LA) were collected during the CE sampling. This resulted in a collection frequency of 4.5%. This is 0.5% less than the 5% frequency called for in the SAP. While the collection frequency of 5% was not met, given the low number of samples with detects of LA and that the same volume of air was collected between each replicate and its parent sample, this deficiency in replicate collection frequency will not affect the quality of the data collected.

As detailed in Libby Field Office Record of Modification Forms LFO-000064a and 64b, the frequency of QC sample collection was changed to the following requirement:

- One field blank was collected at a frequency of one per team per day and analyzed at a frequency of one per team per week for each media. Those field blanks collected but not submitted for analysis were placed into archive.

A total of six field blanks were analyzed (three for air sampling and three for dust samples). LA was not detected in any of the blank samples collected.

3.3.5 Overview of Results

A total of five air samples (collected from four different properties) showed detects of one LA structure each, with concentrations ranging from 0.0001 to 0.0002 S/cc. Below a brief summary of the samples with LA detects, by sample type, is shown.

Table 3-2. Overview of Sample Results

Type of Sample	Total Number of Samples Collected	Number of Samples With LA	Percentage of Samples With LA	Concentration Range of Samples With LA
Ambient Air	66	4	6.1%	0.0001 S/cc to 0.0002 S/cc
Personal Air	8	1	12.5%	0.0001 S/cc
Dust	32	0	0%	NA
Total	**106**	**5**	**4.72%**	

Section 4
References

AHERA. 2002. Asbestos Hazard Emergency Response Act 40 CFR, Chapter 1, Subchapter R, Part 763, Subpart E, Appendix A. Federal Register 2 FR 41846, October, 1987. Data current as of the Federal Register dated May 2002.

CDM. 2003. Final Sampling and Analysis Plan Addendum, Post Clean-Up Evaluation Sampling. December.

_____ and Syracuse Research Corporation (SRC). 2003. Sampling and Analysis Plan for Indoor Dust, for use at the Libby, Montana, Superfund Site, Revision 0, Version 2. August.

EPA. 2000. Sampling and Quality Assurance Project Plan Revision 1 for Libby, Montana, Environmental Monitoring for Libby Amphibole (LA) Asbestos, Baseline Monitoring for Source Area and Residential Exposure to Tremolite-Actinolite Libby Amphibole (LA) Asbestos Fibers. January.

International Organization for Standardization (ISO). 1995. Ambient Air – Determination of Asbestos Fibers – Direct Transfer transmission Electron Microscopy (TEM) Method ISO 1031:1995(E).

Appendix A
Post Clean-Up Evaluation Sampling Field Paperwork

100305

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

TRANSIT

All-Weather Notebook
No. 301

Libby Asbestos Project
Post-Cleanup Evaluation
12-15-03 to 1/30/04

4 5/8" x 7" - 48 Numbered Pages

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

Libby Asbestos Project
COM/Mactec Contractor Logbook

Return to:
Dave Schroeder
318 Louisiana Avenue
Libby, MT 59923
406-293-8595

Every Page:
- > Initial and date all pages
- > Sign and date last entry of the day
- > Line out once, initial and date all changes
- > NO blank lines

Daily Entries:
- > Author
- > Date/Time
- > Weather
- > Activities
- > Persons on team
- > Level of PPE
- > Title of governing document
- > Serial numbers of equipment

Clear Vinyl Protective Slipcovers (Item No. 30) are available for this style of notebook. Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Darling Corporation.

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PAGE	REFERENCE	DATE
2-3	1109 Louisiana Ave -- Allen	12/15/03
4-5	1106 Utah Ave -- England	12/16/03
6-7	178 Scenery Rd -- Nelson	12/17/03
8-9	450 Farm To Market Rd -- McCilly	12/18/03
10	52 Pearl St.	1/16/04
12	616 Wisconsin Ave.	1/17/04
14	113 W. Oak St.	1/21/04
16	2129 Hwy 2 South	1/23/04
18	123 Humman Ave.	1/29/04
48	PCE Equipment List.	

450 Farm to Market Rd

BD# 002514

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 8, 9 Site Visit Date: 12/18/03

Address: 450 Farm to Market Structure Description: House

Occupant: Vernon McCully Phone Number:

Owner (if different than occupant): NA Phone Number: NA

Business Name: NA

Sampling Team: Shawn Oliveira

Field Form Check Completed by (100% of forms): Kristy Parr

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	**Date Removal Completed: 10/03**	
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile (Yard) None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed (Garden) Stockpile (Yard) None Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes (No) If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other: Does not like vacuum.	Difficult for handicapped people to use.
Heating Source	Wood/Coal ~~Electric~~ Propane/Gas Other: Oil	
Heat Distribution	(Forced air) Radiant Other:	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Unknown
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	NA	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Retired.	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION

Sheet No.: D- 000091

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100305 Page No: 8,9 Sampling Date: 12/18/03

Address: 450 Farm to Market Owner/Tenant: Vernon McCully

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00058		
Location ID	BD-002514		
Sample Group (circle) (Subgroup of the property)	Garage, (House) Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	(Basement) (Ground Floor) Second Level Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 NA (400)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	00613		
Flow Meter ID No.	B-1610 5-1521		
Start Time (1811)	1811 / 1814 / 1817	1820	
Start Flow (L/min)	2.0 / 2.0 / 2.0		
Stop Time	1813 / 1816 / 1819	1822	
Stop Flow (L/min)	2.0 / 2.0 / 2.0		
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments Cassette Lot Number: _____	100 cm^2 Ground level •front entrance •carpet 100 cm^2 Ground level •back entrance •linoleum 100 cm^2 Ground level •horizontal surfaces Archive Blank (circle): Yes No	100 cm^2 Basement •tile floor, bottom of steps 100 cm^2 100 cm^2 12/15 Shawn Oliveira Archive Blank (circle): Yes No	100 cm^2 100 cm^2 100 cm^2 Archive Blank (circle): Yes No
Entered (LFO) ✓	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000171

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 39 Sampling Date: 12/18/03

Address: 450 Farm to Market Owner/Tenant: Vernon McCully

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira.

Data Item	5012/18/03 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00056		
Location ID	BD-002514		
Sample Group	House		
Location Description	Hallway connecting Living room & bedroom		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	08911		
Flow Meter ID No.	95356-3		
Start Date	12/18/03		
Start Time	836		
Start Flow (L/min)	9.21		
Stop Date	12/18/03		
Stop Time	1952		
Stop Flow (L/min)	9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) _____ Entered (LFO) _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000184

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 8, 9 Sampling Date: 12/18/03

Address: 450 Farm to Market Owner/Tenant: Vernon McCully

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00057		
Location ID	BD-002514 House 12/18/03		
Sample Group	House		
Location Description	Basement		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	0387		
Flow Meter ID No.	95356-3		
Start Date	12/18/03		
Start Time	839		
Start Flow (L/min)	9.21		
Stop Date	12/18/03		
Stop Time	1954		
Stop Flow (L/min)	9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ✓ Entered (LFO) ✓	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

8 Vernon McCully 12/18/03

Volpe/EPA Author: Shawn Oliveira

Activity: Post-Cleanup Evaluation Sampling at 430 Farm to Market Rd. BDat

Stationary Air and Dust Samples will be collected per SAP Addendum, PCE Sampling, CSS, 12/1/03. Dry cal B-1610, S-1521 used to calibrate Low Vol pump for Dust Samples.

Equipment Ref pg 48 of this book.

826 Arrive onsite. McCully's present.

836 CE-00056 placed on Pump, pre-calibrated, and started. Ref FSDS SA-000171

839 CE-00057 placed on Pump, pre-calibrated, and started Ref FSDS SA-000184.

853 Depart site.

1133 Arrive onsite, perform Flow and filter checks on CE-00056, 57. All ok.

1146 Depart site.

1440 Arrive onsite, resident not home, unable to perform flow + filter checks.

1802 Arrive at site, perform flow and filter checks on CE-00056, 57. All ok.

1822 Dust Sample CE-00058 collected, capped and sealed. Ref. FSDS-D-000091.

1828 Complete P.I.F.

12/18/03 Shawn Oliveira

9 Vernon McCully Author: Shawn Oliveira 12/18/03

Volpe/EPA Post Clean up Evaluation Sampling.

1840 Depart Site

1946 Arrive at site, Complete Residential Activity.

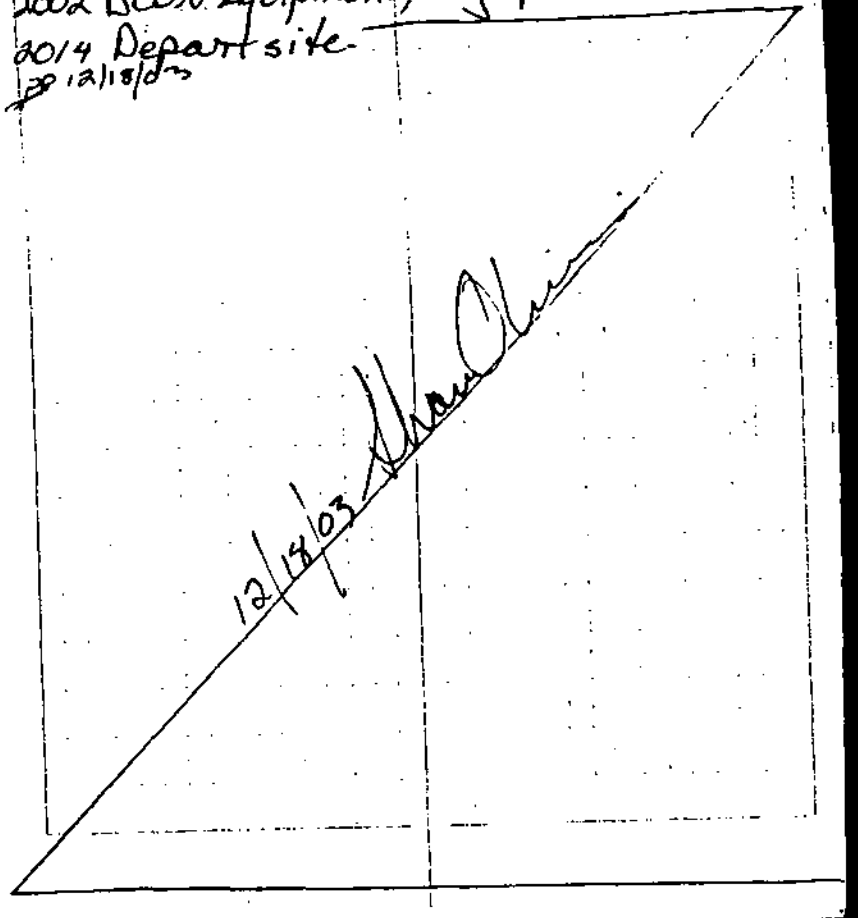
1952 CE-00056 stopped, post-calibrated, and sealed. Ref. FSDS SA-000171.

1954 CE-00057 stopped, post-calibrated, and sealed. Ref FSDS SA-000184.

2002 DCON Equipment, bag up PPE.

2014 Depart site.

12/18/03



2293 Kootenai River Rd

BD# BD-000785

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100301 Page No.: 18-26 Site Visit Date: 12/15/03

Address: 2293 Kootenai River Rd. Structure Description: House

Occupant: Mike Powers Phone Number: 293-9285

Owner (if different than occupant): _____ Phone Number: _____

Business Name: WIA

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): MD ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 10/03
Location of vermiculite removed indoors	(Attic) (Walls (interior or exterior)) (Crawl Space) Basement Sub-floor Other: _____	
Location of vermiculite remaining indoors	Attic (Walls (interior or exterior)) Crawl Space Basement (Sub-floor) None Other: _____	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) (Ground) (Second) Garage (Attic) Other: _____	
Was carpet removed during removal activities?	(Yes) No NA	
Location of vermiculite removed outdoors	(Driveway) (Flowerbed) (Garden) Stockpile (Yard) None Other: _____	Pasture - Cellar Barn - Pump house Bunkhouse Garage - Cottage
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile (Yard) None Other: _____	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other:_____	Used it for about a week Then ER removed.
Heating Source	Wood/Coal Electric Propane/Gas Other: Fuel 0.1	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	(Yes) No Unknown	Explain: During Remodeling
Addresses of other homes or properties where the occupants visit and may contain vermiculite	313 Californeu	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite? Yes - Parking area - walls
Addresses or names of business where occupants work	Naturally Good Things 313 Californeu 108 E. 4th St. Suite 3	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: D- 000056

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100301 Page No: 4-5 Sampling Date: 11/20/03

Address: 2293 Kootenai River Rd. Owner/Tenant: Mike Powers

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: (MACTEC) CDM Other _____ Names: PARANH

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00001		
Location ID	BD-000795		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other _____	Garage, House, Shed, Pump House Other _____	Garage, House, Shed, Pump House Other Blank
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), Second Level Other _____	Basement, Ground Floor, Second Level Other _____	Basement, Ground Floor, Second Level Other 11/20/03
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other _____	Horizontal Surfaces High Traffic Areas Other _____	Horizontal Surfaces High Traffic Areas Other N/A
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS (FB-(field blank)) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 (NA)
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	(25mm) 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	(TEM- .45) PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal (NA)
Pump ID No.	612058	612058	N/A
Flow Meter ID No.	B1610 51521	B1610-51521	
Start Time	1333 / 1337 / 1340	1343	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1335 / 1339 / 1342	1345	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments Cassette Lot Number: 23802	100 cm^2 - Dining Room Floor 100 cm^2 - Kitchen Floor 100 cm^2 - Dining Room window sill	100 cm^2 - Kitchen - top of refridgerator 100 cm^2 100 cm^2	100 cm^2 100 cm^2 100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) TC	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

For Field Team Completion (Provide Initials)	Completed by MP	QC by BD

vs 101503

Sheet No.: D- 000057

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 150301 Page No: 4-5 Sampling Date: 11/20/03

Address: 2293 Kootenai River Rd. Owner/Tenant: Mike Powers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: (MACTEC) CDM Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00002		
Location ID	BD-000785		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), (Second Level) Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces), (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (600)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	G12058	G12058	
Flow Meter ID No.	B1610 51521	B1610-51521	
Start Time	1355 / 1359 / 1403	1407 / 1416	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0	
Stop Time	1357 / 1401 / 1405	1409 / 1418	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0	
Pump Fault? (circle)	(No) Yes	(No) Yes	No Yes
Field Comments Cassette Lot Number: 23802	100 cm^2 - Basement Bookshelf 100 cm^2 - Basement floor @ base of steps 100 cm^2 - Ground level on floor of unfinished Room Archive Blank (circle): Yes No	100 cm^2 - Ground level on window sill of unfinished room 100 cm^2 - 2nd level on floor @ top of steps 100 cm^2 - 2nd level on top of closet Archive Blank (circle): Yes No	100 cm^2 100 cm^2 100 cm^2 Archive Blank (circle): Yes No
Entered (LFO) JC	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

JP 11/20/03

JP 11/20/03

JP 11/20/03

For Field Team Completion (Provide Initials)	Completed by JP	QC by BD

vs 101503

Sheet No.: SA- 000148

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 18-20 Sampling Date: 12/15/03

Address: 2293 Kootenai River Rd. Owner/Tenant: Powers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00013		
Location ID	3D-000785		
Sample Group	House		
Location Description	Basement Finished		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2141		
Flow Meter ID No.	92045-1		
Start Date	12/15/03		
Start Time	929		
Start Flow (L/min)	4.09		
Stop Date	12/15/03		
Stop Time	1940		
Stop Flow (L/min)	3.90		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) TC	Volpe:	Volpe:	Volpe:
Entered (LFO) JB	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by •	QC by •

vs 101503

Sheet No.: SA-000149

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 18-20 Sampling Date: 12/15/03

Address: 2293 Kootenai River Rd. Owner/Tenant: Powers

Business Name: n/a

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (12/15/03)	Cassette 2	Cassette 3
Index ID	CE- 00014		
Location ID	BD-000785		
Sample Group	House		
Location Description	Living Room Unfinished		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2140		
Flow Meter ID No.	92045-1		
Start Date	12/15/03		
Start Time	0933		
Start Flow (L/min)	4.09		
Stop Date	12/15/03		
Stop Time	1942		
Stop Flow (L/min)	4.09		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	609 min x 4.09 L/min = 2491 L		
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) TL	Volpe:	Volpe:	Volpe:
Entered (LFO) JB	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA-000150

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 18-20 Sampling Date: 12/15/03

Address: 2293 Kootenai River Rd Owner/Tenant: Bowers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00015		
Location ID	BD-000785		
Sample Group	House		
Location Description	N.W. Bedroom		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2134		
Flow Meter ID No.	92045-1		
Start Date	12/15/03		
Start Time	0936		
Start Flow (L/min)	4.09		
Stop Date	12/15/03		
Stop Time	1945		
Stop Flow (L/min)	4.29		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	60 min x 4.19 L/min = ~~243~~ 2552 L JP 12/15/03		
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JP	Volpe:	Volpe:	Volpe:
Entered (LFO) JD	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: PA- 000034

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Field Logbook No: 100301 Page No: 18-20 Sampling Date: 12/15/03

Address: 2293 Kootenai River Rd. Owner/Tenant: Powers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Person Sampled: Georgine Powers SNN: 0955 Task: Post Clean Up Evaluation
Mike Powers

Data Item	12/15/03 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00016		
Location ID	BD-000785		
Sample Group	House		
Location Description	Shoulder		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor	Indoor Outdoor	Indoor Outdoor
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	612058	666248	
Flow Meter ID No.	92045-1	92045-1	
Start Date	12/15/03	12/15/03	
Start Time	0956 / 1304	1527	
Start Flow (L/min)	3.11 / 3.11	3.11	
Stop Date	12/15/03	12/15/03	
Stop Time	1360 / 1503	1935	
Stop Flow (L/min)	3.11 / 3.11	3.11	
Pump fault? (circle)	No (Yes) NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	TWA EXC (NA)	TWA EXC (NA)	TWA EXC NA
Field Comments	303 min 184 min x 3.11 = 572 L 119 min x 3.11 = 370 L	128 min x 3.11 L/min = 398 L V_T = 1340 L	
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) •	Volpe:	Volpe:	Volpe:
Entered (LFO) •	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by •	QC by •

vs 101503

BD# 000785

Residential Activity Log

Resident Address: 2293 Kootenai River Rd.

Volunteer Name: Mike + Georgine Powers

Sampling Date(s): 12/16/03

Personal air sample number (s): CE-00016

FSDS number(s): PA-000035, SA-000159, 158

Date/Time Interval	Go Outside?	Pump problem?	General Activities	
12/16/03 0800 - 1030	(No) Yes (___ mins) Describe	(No) Yes (describe)	Christmas parade Vacuumed in remodel area 15 min ~~changed filters~~	Mike Mike Furnace
1030 - 11:15	(No)		Normal Routine ark 15-20 min	Mike
1115 - 11:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Gregg checked monitors	Mike
11:30 - 12:00	No	No	Watched Video Switched W/ Geo	Mike
12:00 - 12:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Lunch Preparation + Lunch Time	Georgine
12:30 - 2:00	No	No	Swept Middle Floor Vacuumed Remodel Room	
2:00 - 2:20	(No) Yes (___ mins) Describe	(No) Yes (describe)	Folded Clean Clothes	
2:25 - Stopped machine		(Yes) →	Greg changed Monitors	
2:30 - 3:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Worked on Christmas Cards	
3:30 - 5:00	No	No	Kitchen Work	
5:00 - 6:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	More Kitchen Work + Dinner	
6:30 - 7:25	No	No	Christmas Card Writing	

Switched to Geo ↓

Georgine ↓

Note: Continue on second page if necessary.

Greg
293-1759

12/17/03

BD# B000785

Residential Activity Log

Resident Address: 2293 Kootenai River Rd.

Volunteer Name: Mike ~ Georgine Powers

Sampling Date(s): 12/17/03

Personal air sample number (s): CE-00016

FSDS number(s): PA-00036, SA-000166, 168, 169

Date/Time Interval	Go Outside?	Pump problem?	General Activities
0820 - 0900	(No) Yes (___ mins) Describe	(No) Yes (describe)	Christmas cards
			Christmas cards
0900 - 0940	(No)	(No)	swept ceilings, glass surfaces in area encapsulated by EPA contractor
	(Yes) 1½ min	to bed lady.	swept steps
0940 - 1100	(No) Yes (___ mins) Describe	(No) Yes (describe)	swept stairs to 2nd floor & mopped
1100 - 1110	(Yes) 1-2 min	(No)	Had a visitor (Gregg's Nurse & Vmonitor)
1112 - 11:30	(Yes) 1 min	(No)	
11:30 - 12:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Kitchen work
12:30 - 1:15	No	No.	Cleaned bathroom & rooms in basement + phone: 10 min
1:30 - 2:00	(No) Yes (___ mins) Describe	(No) Yes (describe)	Swept debris & nails on top floors
2:00 - 2:15	(No)	(No)	phone & changed clothes - Gregg came out
Completed at 2:15	No Yes (___ mins) Describe	No Yes (describe)	~~Sweetback to Missoula~~
	No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

* swept, with a Broom, all the shiny surfaces in the areas cleaned by EPA, including encapsulated surfaces, ceilings, mirrors, window glass & varnished wood.

2293 Kootenai River Rd.

Location Mike Powers Date 11/20/03

Project / Client Post Clean Up Evaluation EPA

Author: Gregory Parana MACTEC

Weather: 34°F Wind 1mph S→N

Activity: Dust samples will be collected in the house (BD-000785). Dust samples will be collected in accordance with SAP Addendum, Post Clean-Up Evaluation Sampling, CSS, Libby Asbestos Site, OU4, 11/13/03. ~~Deviations to Section~~ 11/20/03

Modifications to section 3.2.4 include.

1.) 2 dust samples will be collected in the house.

2.) House will be broken down into 2 areas - Kitchen/dining room - Basement, ~~unfinished~~ 11/20/03 unfinished ground level and 2nd level.

Equipment: DryCal BIG10 S1521, Low vol. sampling pump, 6.45 ~~Ref~~ 11/20/03 µm Dust sample cassettes, bags, decon wipes, ~~rox to cut~~ 11/20/03 100cm² templates.

1100 Pump 612058 pre-calibrated with DryCal to 2.0 l/min @ 318 Louisiana Ave. 11/20/03

2293 Kootenai River Rd.

Location Mike Powers Date 11/20/03

Project / Client Post Clean Up Evaluation EPA

Author: Gregory Parana MACTEC

1300 Onsite. Mike powers present. Mr. Power identified areas that visible vermiculite was noted.

1345 CE-00001 collected (Dining Room, kitchen) Sample sealed.

1418 CE-00002 collected (Composite of basement, unfinished ground level and unfinished 2nd level. Sample sealed. Mike Powers left property.

1435 Offsite. Door locked. Sample pump decontaminated Ref FSDS1)-000056,57.

1550 Samples relinquished to CDM Terry Crowell. 1600 out of logbook.

11/20/03

Powers

Location 2293 Kootenai River Rd. 12/15/03

Project / Client Post Clean Up Evaluation - EPA/Volpe

Author: Gregory Perano .com

Activity: Personal and stationary air sampling will be conducted to complete the post clean up evaluation. Dust samples were collected on 11/20/03 (Ref pgs. 4 & 5) Sampling will be conducted IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment: Ref pg. 6 of this Logbook. 0900 Onsite @ Naturally Good Things.

0915 Onsite 2293 Kootenai River Rd. Mike Powers present. High vol samplings pumps started to warm-up. CE-00013 placed on pump 2141 and pre-calibrated.

0929 CE-00013 (Basement) started. CE-00014 (Living Room) placed on pump 2140 and pre-calibrated.

0933 CE-00014 started.

0934 CE-00015 placed on pump 2134 and pre-calibrated.

0936 CE-00015 (N.W. Bedroom) started. PIF completed with Mike Powers.

0950 Georgine Powers onsite.

12/15/03

Powers

Location 2293 Kootenai River Rd. 12/15/03

Project / Client PCE - EPA/Volpe

Author: Gregory Perano .com

CE-00016 placed on pump 612058 and pre-calibrated.

0956 CE-00016 started. Placed on Georgine Powers. She indicated that Mike Powers would also wear the pump throughout the day. The changes on who will be wearing the pump will be indicated on the Residential Activity Log.

1259 Onsite. 1300 CE-00016 stopped. Removed from Georgine and placed on Mike. Flow ck-OK.

1300 CE-00016 started.

1304 CE-00013 Flow Ck - OK.

1307 CE-00014 Flow Ck - OK.

1315 to CDM Office.

1510 Received phone call from Mike Powers indicating the pump had stopped running.

1520 Onsite. Pump-Battery fault-303 minutes on counter. CE-00016 post-calibrated on pump 612058.

12/15/03

Powers

Location 2293 Kootenai River Rd Date 12/15/03

Project / Client PCE - EPA - Volpe

Author: Gregory Parana CDM

CE-00016 placed on pump 666248 and pre-calibrated. Sample placed on Mike Powers.

EVP 12/15/03 1527 CE-00016 started.

1540 CE-00013 flow ck - OK.

1542 CE-00014 flow ck - OK.

1545 CE-00015 flow ck - OK. 1548 offsite

1930 Onsite.

1935 CE-00016 stopped - post calibrated and sealed in sample bag.

1940 CE-00013 stopped. Post calibrated and sealed in sample bag.

1942 CE-00014 stopped, Post calibrated and sealed in sample bag.

1945 CE-00015 stopped. Post calibrated and sealed in sample bag.

Equipment wiped off and left @ site.

1950 Offsite to CDM office 12/15/03.

Samples locked in sample storage.

Ref ESDS DA-000034, SA-000148, 149, 150

2030 Out of logbook.

12/15/03

Powers

Location 2293 Kootenai River Rd Date 12/16/03

Project / Client PCE - EPA - Volpe

Author: Gregory Parana CDM

Activity: Day 2 of PCE sampling IN BD-000785. Personal air samples will be collected on Mike and Georgine Power and stationary air samples will be collected ON each level of the house. Sampling will be conducted IAW SAP Addendum, PCE Sampling, CSS 12/1/03. Equipment Ref. pg 6 of this logbook.

0755 Onsite. MP and GP present. CE-00016 placed on pump 612058 and pre-calibrated with Rotometer G2045-1.

0811 CE-00016 placed on MP started MP + GP indicated that CE-00016 would be switched between the two over the sample period. I advised to write who was wearing the sample on the activity log. CE-00013 placed on pump 2141 and pre-calibrated.

0815 CE-00013 (Basement) started.

12/16/03

Powers
Location 2293 Kootenai River Rd Date 12/16/03
Project / Client PCE-EPA/Volpe
Author: Gregory Tarana GM

CE-00014 placed on pump 2140 and pre-calibrated! — GT
0817 CE-00014 started. (Living Room). CE-00015 placed on pump 2134 and pre-calibrated. — GT
0819 CE-00015 started. — GT
0820 Offsite. to 603 W. 10th St.
1115 Onsite. CE-00016 cal ck-OK and filter ck-OK. — GT
1126 CE-00015 stopped. Re-calibrated.
1127 CE-00015 started. — GT
LE 1121 CE-00013 stopped - Re-calibrated.
1122 CE-00013 started. — GT
LE 1124 CE-00014 stopped Re-calibrated
12/16/03
1125 CE-00014 started. — GT
1140 Offsite. — GT
1425 Onsite - Georgine indicated pump G12058 stopped. 370 minutes on counter will be used to calculate stop time. CE-00016 post-calibrated. CE-00016 placed on pump G 26752 and calibrated.
1428 CE-00016 place on GP and started.

12/16/03

Powers
Location 2293 Kootenai River Rd Date 12/16/03
Project / Client PCE - Volpe/EPA
Author: Gregory Tarana GM

CE-00013, 14, 15 flow ck'd - OK Filter Chk - OK. 1435 Offsite to 603 W. 10th St. — GT
1730 Onsite. Georgine wearing pump doing kitchen work. filter flow 12/16/03 ck - OK Cal ck - OK for CE-00016. — GT
1735 CE-00013 flow ck - OK filter - ck - 03 — GT
1737 CE-00014 flow ck - OK Filter ck OK CE-00015 flow ck - OK Filter Ck - OK
1925 CE-00016 stopped, post calibrated and sealed in bag
1927 CE-00014 stopped, post calibrated and sealed in the bag. — GT
1930 CE-00013 stopped, post calibrated and sealed in the bag. — GT
1932 CE-00015 stopped, post calibrated and sealed. Offsite to COM Office.
1815 Samples locked in sample storage @ 318 Louisiana Ave.
LE Received complete residential activity log from Powers — 12/16/03

24

2293 Kootenai River Rd.

Location Powers Date 12/17/03

Project / Client PCE-EPA-Volpe

Author: Gregory Paruna COM

Activity: Personal and stationary air sampling will be completed for day 3 of the PCE. Sampling will be conducted IAW SAP Addendum (5), Post Clean Up Evaluation Sampling, 12/1/03. Equipment Reference pg 6 of this logbook.

0800 Onsite Mike and Georgine Power present. CE-00016 placed on pump 626752 and pre-calibrated.

0810 CE-00016 placed on MP and started. CE-00013 placed on pump 2141 and pre-calibrated.

0812 CE-00013 started.

CE-00014 placed on pump 2140 and ~~start~~ 12/17/03 pre-calibrated.

0814 CE-00014 started.

CE-00015 placed on pump 2134 and pre-calibrated.

0815 CE-00015 started. Residential Activity log given to volunteer.

0820 Offsite to 603 W. 10th St.

1100 Onsite. CE-00016 flow Ck - OK Filter Ck - ≈ 30% loaded.

12/17/03

2293 Kootenai River Rd.

Location Powers Date 12/17/03

Project / Client PCE-EPA-Volpe

Author: Gregory Paruna SDM

Mike powers indicated the he swept the upstairs and ground level construction area with a broom.

1112 CE-00013 stopped - Re-calibrated.

1113 CE-00013 started. Filter ck-OK.

1115 CE-00014 flow ck, Filter ck-OK.

~~12/17/03 Offsite to 603 W. 10th St.~~

1117 CE-00015 flow ck, Filter ck-OK. Offsite to 603 W. 10th St.

1410 Onsite. GP wearing pump. She indicated the she swept the upstairs and ground level construction area with a broom: CE-00016 filter obscured - Filter loaded.

1415 CE-00016 stopped, post calibrated and sealed. Stationary air samples will be stopped as well.

1421 CE-00014 stopped, post calibrated and sealed.

1423 CE-00013 stopped, post calibrated and sealed.

12/17/03

26 2293 Kootenai River Rd

Location Powers Date 12/17/03

Project / Client PCE - Epa / Volpe

Author: Gregory Paranac COM

1429 CE-00015 stopped, post calibrated and sealed. Equipment decon completed. Residential activity log received from Georgine Powers offsite. Ref FSDS PA-00036, SA-000166, 168, 169 (b)

12/17/03

113 W. Oak St

BD# 002645

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 14-15 Site Visit Date: 1/21/04

Address: 113 W. Oak St. Structure Description: House

Occupant: Jamie ~ Tyson Sanderson Phone Number: 293-9795

Owner (if different than occupant): N/A Phone Number: N/A

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): HP ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	**Date Removal Completed: 11/03**	
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space (Basement) Sub-floor Other:	
Location of vermiculite remaining indoors	Attic (Walls (interior or exterior)) Crawl Space Basement Sub-floor None Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) (Ground) Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway (Flowerbed) (Garden) Stockpile Yard None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard None Other: Unknown	Snowed after removal

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week (More than once a week) Twice a month Once a month Less than once a month Other:_____	3 times/wk
Heating Source	(Wood/Coal) (Electric) Propane/Gas Other:_____	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Rosaurs - Jamie Tyson - Lossee	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA-000239

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 14-15 Sampling Date: 11/21/04

Address: 113 W. Oak St. Owner/Tenant: Jaime Sanderson

Business Name: NIH

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
	JP 11/21/04	JP 11/21/04	
Index ID	CE- 00087	CE- 00088	
Location ID	BD-002645	BD-002645	
Sample Group	House	JP 11/21/04 ~~House~~ Basement	
Location Description	Ground level Master Bedroom	Basement	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor - NA	(Indoor) Outdoor - NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	05913	05910	
Flow Meter ID No.	92045-1	92045-1	
Start Date	11/21/04	11/21/04	
Start Time	0835	0839	
Start Flow (L/min)	9.03	9.03	
Stop Date	11/21/04	11/21/04	
Stop Time	JP 11/21/04 ~~2005~~ 2008	2010	
Stop Flow (L/min)	9.03	9.03	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			JP 11/21/04
Cassette Lot Number:	310201		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) _____ Entered (LFO) JB	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000109

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

d Logbook No: 160305 Page No: 14-15 Sampling Date: 1/21/04

Address: 113 W. Oak St. Owner/Tenant: Tyson & Jamie Tyson

Business Name: N/A Sanderson/Lot 75

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00089		
Location ID	BA-002645		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces), (High Traffic Areas) Other	Horizontal Surfaces, High Traffic Areas Other	Horizontal Surfaces, High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 ~~300~~ (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	626666		
Flow Meter ID No.	A1610-S1521	JP 1/21/04	
Start Time	1943 / 1946 / 1950	1955	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1945 / 1948 / 1952	~~0955~~ 1955	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 - Kitchen Floor Different 100 cm^2 - Living Rm top of fireplace mantel 100 cm^2 - Basement Floor	100 cm^2 Basement top of water heater 100 cm^2 100 cm^2	100 cm^2 JP 1/21/04 100 cm^2 100 cm^2
Cassette Lot Number:	23802		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) JP	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

For Field Team Completion (Provide Initials)	Completed by	QC by

113 W. Oak St. - Jamie Sanderson 1/21/04
PCE - EPA/Volpe
Author: Gregory Parana CDM
Activity: Stationary Air and dust samples will be collected as part of the PCE. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, PCE Sampling.
0825 Onsite. Jamie present.
CE-00087 (Ground level) pre-calibrated.
0835 CE-00087 started.
CE-00088 pre-calibrated and started.
Offsite to 2297 KRR.
1145 Onsite. PIF BD-002645 completed with resident.
Sample Flow Clc, Filter Ck - OK.
1430 Onsite - Resident not home - locked.
1700 Onsite - Residents not home.
1940 Onsite:
1955 CE-00089 (dust) collected.
2008 CE-00087 stopped, post calibrated and sealed.
2010 CE-00088 stopped, post calibrated and sealed.

1/21/04

113 W. Oak St. Jamie Sanderson 1/21/04
PCE - EPA/Volpe
Author: Gregory Parana
2030 Onsite @ CDM office
Samples lock in sample storage. Ref FSDS SA-000235 ID-000109 Out of logbook.

1/21/04

1108 Louisiana Avenue

BD# 002223

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 19 Site Visit Date: 1/30/04

Address: 1108 Louisiana Ave Structure Description: House

Occupant: Connie Leckrone Phone Number: 293-6014

Owner (if different than occupant): NA Phone Number:

Business Name: NA

Sampling Team: Shawn Oliveira

Field Form Check Completed by (100% of forms): YP PS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	**Date Removal Completed:** 09/03	
Location of vermiculite removed indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor Other: None	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	Yes (No) If Yes, which floors: Basement Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway (Flowerbed) Garden Stockpile (Yard) None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other: YP 1/30/04	North Yard

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	(Once a week) More than once a week Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal (Electric) Propane/Gas Other: Fuel Oil	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	UPS - Commerce Way	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: D- 000135

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100305 Page No: 19 Sampling Date: 1/30/04

Address: 1108 Louisiana Ave Owner/Tenant: Connie Lockrone

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	so 1/30/04 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00125		
Location ID	BD-002223		
Sample Group (circle) (Subgroup of the property)	Garage, (House) Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement) (Ground Floor) (Second Level) Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 (600) NA	100 200 300 NA	100 200 (300) NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM-.45) PCM- 0.8	TEM-.45 PCM- 0.8	TEM-.45 (PCM-0.8)
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	612767 ~~B-1610 S-1521~~	so 1/30/04	
Flow Meter ID No.	R-1410 S-1521		
Start Time	1140 / 1142 / 1144	1147 / 1149 / 1151	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0 / 2.0	
Stop Time	1142 / 1144 / 1146	1149 / 1151 / 1153	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0 / 2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 Basement horizontal surfaces. 100 cm^2 Basement corner of doorway room 100 cm^2 Ground level bookshelf, couch, table	100 cm^2 Ground level horizontal surfaces 100 cm^2 2nd floor top of steps, carpet 100 cm^2 2nd floor, horizontal surfaces.	100 cm^2 100 cm^2 100 cm^2
Cassette Lot Number: 23802 √MP	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000271

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100325 Page No: 19 Sampling Date: 1/30/04

Address: 1109 Louisiana Ave Owner/Tenant: Connie Leckrone

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	1/30/04 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00124		
Location ID	BD-002223		
Sample Group	House		
Location Description	2nd Floor, top of steps		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	05910		
Flow Meter ID No.	006196		
Start Date	1/30/04		
Start Time	847 1/30/04		
Start Flow (L/min)	9.19		
Stop Date	1/30/04		
Stop Time	2042 1/30/04		
Stop Flow (L/min)	9.19		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments Cassette Lot Number: 31201	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JP Entered (LFO) JD	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000180

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 19 Sampling Date: 1/30/04

Address: 1109 Louisiana Ave Owner/Tenant: Connie Lockrow

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	SO 1/30/04 Cassette 2	SO 1/30/04 Cassette 3
Index ID SO 1/30/04	CE- 00121	CE- 00122	CE- 00123
Location ID	BD-002223	BD-002223	BD-002223
Sample Group	~~House~~ basement	To 2.3.04 ~~House~~ basement	To 2.3.04 House
Location Description	Basement	Basement	Ground floor bedroom
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	(Indoor) Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	(25mm) 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	(Rotometer) DryCal NA
Pump ID Number	05912	05913	0689
Flow Meter ID No.	006196	006196	006196
Start Date	1/30/04	1/30/04	1/30/04
Start Time	841 / SO 1/30/04	843 / SO 1/30/04	845 /
Start Flow (L/min)	9.19 /	9.19 /	9.19 /
Stop Date	1/30/04	1/30/04	1/30/04
Stop Time	2038 / SO 1/30/04	2040 / SO 1/30/04	2041 / SO 1/30/04
Stop Flow (L/min)	9.19 /	9.19 /	9.19 /
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	(No) Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	(No) Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)
Field Comments		Duplicate of CE-00121	
Cassette Lot Number: 310301	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) YP	Volpe:	Volpe:	Volpe:
Entered (LFO) AB	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

1109 Louisiana Ave

BD# 202198

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 2, 3 Site Visit Date: 12/15/03

Address: 1109 Louisiana Structure Description: House

Occupant: Jim Allen Phone Number: 0826

Owner (if different than occupant): NA Phone Number: NA

Business Name: NA

Sampling Team: Shawn Oliveira

Field Form Check Completed by (100% of forms): MP ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 3/25/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: ~~Immediately~~ 10 12/15/03 Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month (Once a month) Less than once a month Other:_____	• Resident Vac'd the entire Living Space with HEPA Vac 1 time prior to P.C.E.
Heating Source	(Wood/Coal) (Electric) Propane/Gas Other:_____	
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months NA	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	Works at Evergreen Motel which has indoor vermiculite.	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Self Employed.	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA-000148

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 2,3 Sampling Date: 12/15/03

Address: 1109 Louisiana Ave Owner/Tenant: Jim Allen

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	12/15/03 Cassette 1	Cassette 2	Cassette 3
Index ID	CF- 00041		
Location ID	BD-002198		
Sample Group	House		
Location Description	Living Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	8911		
Flow Meter ID No.	95356-3		
Start Date	12/15/03		
Start Time	8:33 | 11:44 | 15:16		
Start Flow (L/min)	9.21 | 9.21 | 9.21		
Stop Date	12/15/03		
Stop Time	11:43 | 15:15 | 19:40		
Stop Flow (L/min)	9.21 | 9.21 | 9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	12/16/03 Archive Blank (circle): Yes No
QC (Field Team) JD Entered (LFO) JD	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000147

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 2,3 Sampling Date: 12/15/03

Address: 1109 Louisiana Owner/Tenant: Jim Allen

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	so 12/15/03 CE- 00042		
Location ID	BD-002198		
Sample Group	House		
Location Description	Basement		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	0387		
Flow Meter ID No.	95356-3		
Start Date	12/15/03		
Start Time	838 / 1148 / 1519	/ /	/ /
Start Flow (L/min)	9.21 / 9.21 / 9.21	/ /	/ /
Stop Date	12/15/03		
Stop Time	1147 / 1518 / 1940	/ /	/ /
Stop Flow (L/min)	9.21 / 9.21 / 9.21	/ /	/ /
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			JP 12/16/03
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JP	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____
Entered (LFO) JP			

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D-000084

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100305 Page No: 2,3 Sampling Date: 12/15/03

Address: 1109 Louisiana Ave. Owner/Tenant: Jim Allen

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00044		
Location ID	BD-002198		
Sample Group (circle) (Subgroup of the property)	Garage, (House) Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement) (Ground Floor) Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 NA (400)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	2026583		
Flow Meter ID No.	BIGIO - 51521	12/16/03	
Start Time	1519 / 1522 / 1525	1528	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1521 / 1524 / 1527	1530	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes 12/16/03	No Yes
Field Comments	100 cm^2 Living Room Entrance	100 cm^2	100 cm^2
Cassette Lot Number: 23502	100 cm^2 Back door Entrance	100 cm^2	100 cm^2 12/16/03
	100 cm^2 Ground Level Horizontal Surf 100 cm^2 Basement Entrance	100 cm^2	100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) AP 12/16/03	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

BD# 002198

Residential Activity Log

Resident Address: 1109 Louisiana Ave

Volunteer Name: Jim Allen

Sampling Date(s): 12/15/03

Personal air sample number (s): _____

FSDS number(s): SA-000145, 147 D-000054

Date/Time Interval	Go Outside?	Pump problem?	General Activities
12/15/03 ~8 AM - 6pm	No Yes (___ mins) Describe	No Yes (describe)	Worked in garage workshop.
6 - 8pm	No Yes (___ mins) Describe	No Yes (describe)	In house, watching T.V.
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

Jim Allen Author: Shawn Oliveira 12/15/03
1109 Louisiana Ave EPA/Volpe
Post Removal Evaluation.

Activity: Post Cleanup Evaluation Sampling at 1109 Louisiana Ave. BD#002198.

Stationary Air, and Dust samples will be collected in accordance with the SAP Addendum, PCE Sampling, CSS 12/1/03. DryCal B-1610, S-~~1524~~ 1521 used to calibrate low volume sampling pump for Dust sampling Equipment reference pg 48 of this book.

820 Onsite. Jim Allen present

838 CE-00041 Started, Wood Stove in Use Sample CE-00041 placed on pump 8911 and precalibrated. Ground floor Living Room. CE-00042 Started, placed on pump 0387 and precalibrated. Placed in Basement at bottom of steps.

845 Depart Site.

1140 Arrive onsite flowcheck CE-00041, CE-00042 both ok. Filter Checks OK.

1149 Depart Site.

1440 Arrive onsite. Flowcheck CE-00041, CE-00042, both ok, Filter Checks ok. Wood Stove in use. Complete P.I.F.

1530 Dust Sample CE-00044 collected, capped,

12/15/03 Shawn Oliveira

Jim Allen Author: Shawn Oliveira
1109 Louisiana EPA/Volpe. 12/15/03

1530 Cont'd: and sealed. Refer to FSDS D-000084.

1542 Depart Site.

1935 Arrive at site Mr. Allen Present. Wood stove still in use. Resident spent most of day in workshop.

1940 CE-00041 stopped, post-calibrated and sealed. Ref FSDS-~~CE~~ SA-000145

1942 CE-00042 stopped, post calibrated, and sealed. Ref FSDS SA-000147.

1950 Depart site, after DCONing equipment with wet wipes, bag as PPE.

12/15/03 Shawn Oliveira

1116 Utah Avenue

BD# 002175

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 5 Site Visit Date: 12/16/03

Address: ~~1102~~ 1116 Utah Ave Structure Description: House

Occupant: James & Mary England Phone Number: 293-6550

Owner (if different than occupant): NA Phone Number: NA

Business Name: NA

Sampling Team: Shawn Oliveira

Field Form Check Completed by (100% of forms): MO JS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 3/28/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) (Second) Garage Attic Other:	• Courtesy cleaning of ground level. • Cleaning of 2nd level
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other:_____	Received on 12/10/03 Used once prior to sampling.
Heating Source	(Wood/Coal) (Electric) Propane/Gas Other:_____	Primarily wood heat.
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months NA	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	NA	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Retired	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000150

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 4 Sampling Date: 12/16/03

Address: 12/16/03 1111a 1107 Utah Ave Owner/Tenant: James & Mary England

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	SO 12/16/03 CE- 00048		
Location ID	BD-002175		
Sample Group	House		
Location Description	Basement		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	8911		
Flow Meter ID No.	95356-3		
Start Date	12/16/03		
Start Time	841		
Start Flow (L/min)	9.21		
Stop Date	12/16/03		
Stop Time	1952		
Stop Flow (L/min)	9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	Wood Stove in use ~7 ft away		
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) MP	Volpe:	Volpe:	Volpe:
Entered (LFO) ____	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000161

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 4 Sampling Date: 12/16/03

Address: 1116 #06 Utah Ave (JB 12/17/03) Owner/Tenant: James + Mary England

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	(SO 12/16/03) Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00049		
Location ID	BD-002175		
Sample Group	House		
Location Description	2nd Level Top of Steps		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	0387		
Flow Meter ID No.	95356-3		
Start Date	12/16/03		
Start Time	844 / 1140		
Start Flow (L/min)	9.21 / 9.21		
Stop Date	12/16/03		
Stop Time	1139 / 1954		
Stop Flow (L/min)	9.21 / 9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments / Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JD / Entered (LFO) ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000162

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 4 Sampling Date: 12/16/03

Address: 12/16/03 1116 486 Utah Ave Owner/Tenant: James + Mary England

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	12/16/03 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00050		
Location ID	BD-002175		
Sample Group	House		
Location Description	Kitchen/Dining Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	0689		
Flow Meter ID No.	95356-3		
Start Date	12/16/03		
Start Time	848		
Start Flow (L/min)	9.21		
Stop Date	12/16/03		
Stop Time	1956		
Stop Flow (L/min)	9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) TJ	Volpe:	Volpe:	Volpe:
Entered (LFO)	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000087

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100305 (12/17/03 lb) Page No: 5 Sampling Date: 12/16/03

Address: 1116 ~~H06~~ Utah Ave Owner/Tenant: James & Mary England

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1 (SO 12/16/03)	Cassette 2	Cassette 3
Index ID	CE- 00051		
Location ID	BD-002175		
Sample Group (circle) (Subgroup of the property)	Garage, (House) Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement) (Ground Floor) (Second Level) Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	626583	Shawn Oliveira 12/16/03	
Flow Meter ID No.	B1610-51521		
Start Time	1519 / 1522 / 1525	1528	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1521 / 1524 / 1527	1530	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 Front entrance carpet 100 cm^2 Basement landing carpet. 100 cm^2 2nd level carpet top of steps.	100 cm^2 2nd Level - Horizontal Surfaces below attic entrance 100 cm^2 100 cm^2 12/16/03 Shawn Oliveira	100 cm^2 100 cm^2 100 cm^2
Cassette Lot Number:	23802		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) LP	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Shawn Oliveira c 73-1547 cell.
293-8595 work

BD# 002175

Residential Activity Log

Resident Address: 1116 Utah

Volunteer Name: James & Mary England

Sampling Date(s): 12/16/03

Personal air sample number (s): Stationary Air (CE-00048, 49, 50) Dust CE-00051

FSDS number(s): SA-00160, 161, 162 D-00057

Date/Time Interval	Go Outside?	Pump problem?	General Activities
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	

Sewing and computer work

Note: Continue on second page if necessary.

4 [redacted]es & Mary England 12/16/03
Volpe/EPA Author: Shawn Oliveira
Post Removal Evaluation
Activity: Post Cleanup Evaluation sampling
at 1106 Utah Ave. Sa BD-002175
James + Mary England present.
830 Onsite Stationary air and Dust
samples will be collected with the SAP
Addendum, PCE Sampling, CSS 12/1/03.
Dry Cal B-1610, S-1521 used to calibrate
low volume sample pump for Dust samples.
Equipment Ref pg 48 of this book
841 CE-00048 started, precalibrated, and
placed on pump. Basement, wood stove in
use 7 ft. away.
844 CE-00049 started, placed on pump
and precalibrated. Upstairs, beneath
attic entrance.
848 CE-00050 started, placed on pump
and precalibrated. Ground Level.
900 Depart site.
1137 Arrive onsite, flowcheck CE-00049, 48, 50.
Flowchecks ok. Filterchecks ok.
1155 Depart site
1507 Arrive onsite, flow check CE-00048, 49, 50.
Flowchecks ok. Filterchecks ok.
12/16/03 Shawn Oliveira

[redacted] James + Mary England | Author: Shawn Oliveira
Volpe/EPA 12/16/03
1507 Cont'd wood stove still in use in
basement, Complete P.I.F.
1530 Dust Sample CE-00051 collected, capped,
and sealed. Refer to FSDS D-000087.
1539 Depart site
1830 Arrive at site flow check CE-00048, 49, 50
Flow checks ok, filter check ok. Wood
stove still in use.
1945 Arrive onsite Complete Residential Activity
1952 CE-00048 stopped, post-calibrated,
and sealed. Ref. FSDS SA-000160 12/16/03
1954 CE-00049 stopped, post-calibrated, and
sealed; Ref FSDS SA-000161.
1956 CE-00050 stopped, post calibrated,
and sealed. Ref FSDS-SA-000162.
2000 DCON equipment, bag up PPE.
2011 Depart to CDM OFFICE.
12/16/03 Shawn Oliveira

2129 Highway 2 S

BD# 002240

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 10230#5 Page No.: 16 Site Visit Date: 1/23/04 SC 1/23/04

Address: 2129 Hwy 2 S Structure Description: House

Occupant: John & Tracy Graham Phone Number: 293-3879

Owner (if different than occupant): NA Phone Number: NA

Business Name: NA

Sampling Team: Shawn Olivier CDM

Field Form Check Completed by (100% of forms): LKP JB

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 5/03
Location of vermiculite removed indoors	Attic (Walls (interior or exterior)) Crawl Space Basement (Sub-floor) Other:	
Location of vermiculite remaining indoors	Attic (Walls (interior or exterior)) Crawl Space Basement (Sub-floor) None Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement Ground (Second) Garage (Attic) SC: 1/23/04 Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months (more than 6 months)	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month (Once a month) Less than once a month Other:_____	
Heating Source	(Wood) Coal (Electric) Propane/Gas Other:_____	
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months (3 to 4 months) 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	John - Libby Police Station	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000172

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 1003045 Page No: 16 Sampling Date: 1/24/04

Address: 2129 Hwy 2 S. Owner/Tenant: John + Tracy Graham

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00090	CE- 00091	
Location ID	BD-002290	BD-002290	
Sample Group	House	House	
Location Description	2nd level	Living Room Ground Level	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	0689	05913	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/24/04	1/24/04	
Start Time	0825	0832	
Start Flow (L/min)	9.03	9.03	
Stop Date	1/23/04	1/23/04	
Stop Time	2031	2034	
Stop Flow (L/min)	9.03	4.03	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) MP Entered (LFO) AB	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000090

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100307 + 2127 Page No: 16 Sampling Date: 1/23/04
Address: 3129 Hwy 2 South Owner/Tenant: John + Tracy Cochran
Business Name: N/A
Land Use: (Residential) School Commercial Mining Roadway Other ( )
Sampling Team: MACTEC (CDM) Other _____ Names: Sharon Oliveira

Data Item	so 1/23/04 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00094		
Location ID	BD-002290		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), (Second Level) Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No. so 1/23/04	~~BT010-51521~~	← 626666	
Flow Meter ID No.	BT010-51521		
Start Time	1940 / 1943 / 1945	1949	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1942 / 1945 / 1947	1950	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments Cassette Lot Number: 23902	100 cm^2 Front Entrance carpet 100 cm^2 Back Entrance tile 100 cm^2 Top of stairs carpet	100 cm^2 Kitchen SE end, tile. 100 cm^2 100 cm^2	100 cm^2 100 cm^2 100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) MB	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

16 2129 Hwy 25 John & Tracy Graham 1/23/04
PCE - EPA/Volpe Author: Shawn Oliveira
Activity: Stationary Air and dust samples will be collected as part of the PCE. Sampling will be conducted in Level D PPE, I.A.W. SAP Addendum, CSS, PCE Sampling. SO
820 Onsite, Terry Crooks present, resident will not be home until after 6:30 pm. CE-00080 (Ground Level) set-up and pre-calibrated.
825 CE-00090 started. SO
829 CE-00091 set-up and pre-calibrated.
831 CE-00091 started. Offsite to 86 Paliga
1840 Onsite, resident not home. SO
1937 Arrive onsite. Flow check ok. Filter check ok.
1940 CE-00094 (Dust) Collected. SO
2028 Arrive onsite. CE-00090 stopped, post-calibrated, and collected. SO
2034 CE-00091 stopped, post calibrated, and collected.
2113 Return to CAM, samples locked in sample storage
Ref FSDS: SA-000172, D-000090.

1/23/04

86 Paliga Dr

BD# 003208

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 17 Site Visit Date: 1/23/04

Address: 56 Aeligo Dr. Structure Description: House

Occupant: Wes Morgan Phone Number: 293-5253

Owner (if different than occupant): NA Phone Number: N/A

Business Name: NA

Sampling Team: Shawn Oliveira

Field Form Check Completed by (100% of forms): JP JP

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 8/03
Location of vermiculite removed indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor Other: NA	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed (Garden) Stockpile (Yard) None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: *Immediately* 1 to 2 months 3 to 4 months (5 to 6 months) *more than 6 months*	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month (Once a month) Less than once a month Other:_____	
Heating Source	(Wood) Coal Electric Propane/Gas Other:_____	
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Works @ home	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000173

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 17 Sampling Date: 1/23/04

Address: 86 Paluga Owner/Tenant: Wes Morgan

Business Name: N/A

Land Use: (Residential) School (Commercial) Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00092	CE- 00093	
Location ID	BD-003208	BD-003208	
Sample Group	Basement	House	
Location Description	Office	Living Room	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	0891	0891-A	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/23/04	1/23/04	
Start Time	0850	0853	
Start Flow (L/min)	9.03	9.03	
Stop Date	1/23/04	1/23/04	
Stop Time	2056 1/23/04	2059 1/23/04	
Stop Flow (L/min)	9.03	9.03	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	Wood stove operating in basement.		
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team)	Volpe:	Volpe:	Volpe:
Entered (LFO)	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs-101503

000089

Sheet No.: D-

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100305 Page No: 17 Sampling Date: 1/23/04

Address: 86 Poliga Dr. Owner/Tenant: Wes Morgan

Business Name: NA 1/23/04

Land Use: (Residential) School (Commercial) Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	1/23/04 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00095		
Location ID	BD-003208		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces), (High Traffic Areas), Other	Horizontal Surfaces, High Traffic Areas, Other	Horizontal Surfaces, High Traffic Areas, Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	626666		
Flow Meter ID No.	B-16105-1521		
Start Time	2042 / 2044 / 2047	2050	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	2044 / 2046 / 2049	2052	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments Cassette Lot Number: 33902	100 cm^2 - Front Entrance - Linoleum 100 cm^2 - Ground Level - Horizontal Surfaces. 100 cm^2 - Basement entrance to backyard	100 cm^2 Basement - Horizontal Surfaces 100 cm^2 100 cm^2	100 cm^2 100 cm^2 100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

86 Paliga Dr. Wes Morgan 1/23/04 17

PCE--EPA/Volpe Author: Shawn Oliveira

Activity: Stationary Air and dust samples will be collected as part of the P.C.E. Sampling will be conducted in Level D PPE I.A.W SAP Addendum, CSS, PCE Sampling.

846 Onsite Wes Morgan present. CE-00092 set-up and pre-calibrated. SO

850 CE-00092 started. SO

852 CE-00093 set-up and pre-calibrated.

853 CE-00093 started SO

1145 Onsite, resident not home. SO

1452 Onsite, resident not home. SO

1738 Onsite, resident not home. SO

2036 Onsite. Flowcheck ok, Filtercheck ok.

2042 CE-00095 (Dust) collected. SO

2056 CE-00092 stopped, post-calibrated, and collected.

2059 CE-00093 stopped, post-calibrated, and collected.

2113 Return to CDM, samples locked in sample storage. Ref FSDS SA-000173, D-000089

1/23/04 Shawn Oliveira

616 Wisconsin Ave

BD# 001574

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 12-13 Site Visit Date: 1/17/04

Address: 6116 Wisconsin Structure Description: Garrow 1/17/04 House

Occupant: Garrow Phone Number: 293-8493

Owner (if different than occupant): same Phone Number: same

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): MP ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 5/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement (Sub-floor) Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement (Sub-floor) None Other:	~~that Contractor~~ Arcus could not get to in the sub-floor
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) (Ground) (Second) Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes (No) If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Received 2 days ago and Resident had not had a chance to use it.
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month 4/17/04 Less than once a month Other:_____	
Heating Source	Wood/Coal Electric Propane/Gas Other: Fuel Oil	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Fish, Wildlife and Parks 475 Fish Hatchery Rd. -May be on clean-up list	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000238

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 12-13 Sampling Date: 1/17/04

Address: 616 Wisconsin Ave. Owner/Tenant: Garrow

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (JP 1/17/04)	Cassette 2 (JP 1/17/04)	Cassette 3 (JP 1/17/04)
Index ID	CE- 00073	CE- 00074	CE- 00075
Location ID	BD-001574	BD-001574	BD-001574
Sample Group	House	House	House
Location Description	Basement	Ground level Living Room	2nd level Hallway
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	(Indoor) Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	(25mm) 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	(Rotometer) DryCal NA
Pump ID Number	05913	05910	0387
Flow Meter ID No.	92045-1	92045-1	92045-1
Start Date	1/17/04	1/17/04	1/17/04
Start Time	0855	0900	0902
Start Flow (L/min)	9.01	9.01	9.01
Stop Date	1/17/04	1/17/04	JP 1/17/04 1/17/04
Stop Time	2017	2021	~~2056~~ 2026
Stop Flow (L/min)	9.01	9.40	9.21
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	(No) Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	(No) Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)
Field Comments			
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team)	Volpe:	Volpe:	Volpe:
Entered (LFO) JB	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000105

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Logbook No: 100305 Page No: 12-13 Sampling Date: 11/7/04

Address: 616 Wisconsin Ave Owner/Tenant: Gaccow

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
	11/7/04		
Index ID	CE- 00076		
Location ID	BD-001574		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), (Second Level) Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces), (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 (300) NA (600)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	G266666	11/7/04	
Flow Meter ID No.	B1610-51521		
Start Time	1632 1635 1638	1641 1645 1648	
Start Flow (L/min)	2.0 2.0 2.0	2.0 2.0 2.0	
Stop Time	1634 1637 1640	1643 1647 1649 1650	
Stop Flow (L/min)	2.0 2.0 2.0	2.0 2.0 2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 Ground level living room top of computer desk 100 cm^2 Ground level Kitchen floor 100 cm^2 2nd level floor @ top of steps	100 cm^2 2nd level top of end table in bedroom 100 cm^2 Basement floor 100 cm^2 Basement top of hotwater tank	100 cm^2 100 cm^2 11/7/04 100 cm^2
Cassette Lot Number:	23802		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

616 Wisconsin Ave - Garrow 1/17/04
PCE - EPA/Volpe Author: Gregory Parra
CDM

Activity: Stationary Air and dust samples will be collected in BA-001574. Sampling will be conducted in level B PPE IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment Reference pg 48 of this logbook.

0845 Onsite. CE-00073 pre-calibrated.
0855 CE-00073 started. GP
CE-00074 pre-calibrated.
0900 CE-00074 started. GP
CE-00075 pre-calibrated.
0902 CE-00075 started. All samples calibration conducted with rotometer #2045-1. Offsite. Resident gave me key to access house. Resident will not be home today. PIF BA-001574 completed with resident. GP
1130 Onsite. Flow ck-OK Filter Ck-OK Offsite. GP
1420 Onsite. Flow ck-OK Filter Ck-OK. Offsite.

1/17/04

616 Wisconsin Ave - Garrow 1/17/04
PCE - EPA/Volpe Author: Gregory Parra

1630 Onsite. GP 1/17/04
1650 CE-00076 (dust) collected and sealed. Flow ck-OK Filter Ck-OK. Offsite. Resident not home GP 1/17/04
2015 Onsite.
2017 CE-00073 stopped, post calibrated and sealed.
2021 CE-00074 stopped, post calibrated and sealed. All equipment decontaminated. House locked and keys placed under door.
2037 Onsite @ CDM Office. Samples placed in sample storage. Ref FSDS SA-000236, D-000105, PIF BA-001574.
2045 Out of logbook.

1/17/04

178 Scenery Rd

BD# 201404

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 6, 7 Site Visit Date: 12/17/03

Address: 178 Scenery Rd Structure Description: House

Occupant: Jeff Nelson Phone Number: 293-2149

Owner (if different than occupant): NA Phone Number: NA

Business Name: NA

Sampling Team: Shawn Oliveira

Field Form Check Completed by (100% of forms): JP ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 3/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) Ground Second Garage Attic Other:	Crawlspace
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months (more than 6 months)	Received 12/15/03 Used twice prior to sampling
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week (More than once a week) Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal Electric (Propane/Gas) Other: Oil	
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months (3 to 4 months) 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	NA	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Rosauer's Student.	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000163

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 6,7 Sampling Date: 12/17/03

Address: 178 Scenery Rd Owner/Tenant: Jeff Nelson

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	so 12/17/03 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00052		
Location ID	BD-001404 ~~so12/17/03 House~~		
Sample Group	so12/17/03 House ~~Kitchen~~		
Location Description	Kitchen		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	8911		
Flow Meter ID No.	95356-3		
Start Date	12/17/03		
Start Time	8 41		
Start Flow (L/min)	9.21		
Stop Date	12/17/03		
Stop Time	1950 ~~so 12/17/03~~		
Stop Flow (L/min)	9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) RL Entered (LFO) VA	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

12/17/03

For Field Team Completion (Provide Initials)	Completed by SL	QC by RL

vs 101503

Sheet No.: SA- 000164

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 6, 7 Sampling Date: 12/17/03

Address: 178 Scenery Rd. Owner/Tenant: Jeff Nelson

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	12/17/03 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00053		
Location ID	BD-001404		
Sample Group	Basement		
Location Description	Bedroom		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	0387		
Flow Meter ID No.	95356-3		
Start Date	12/17/03		
Start Time	843		
Start Flow (L/min)	9.21		
Stop Date	12/17/03		
Stop Time	1952		
Stop Flow (L/min)	9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear- 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team)	Volpe:	Volpe:	Volpe:
Entered (LFO)	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA-000170

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 6, 7 Sampling Date: 12/17/03

Address: 178 Scenery Rd Owner/Tenant: Jeff Nelson

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00054		
Location ID	BD-001404		
Sample Group	Basement		
Location Description	Bedroom		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	0689		
Flow Meter ID No.	95356-3		
Start Date	12/17/03		
Start Time	845		
Start Flow (L/min)	9.21		
Stop Date	12/17/03		
Stop Time	1954		
Stop Flow (L/min)	9.21		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	*Replicate of CE-00053		
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ___ Entered (LFO) ___	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000688

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100305 Page No: 7 Sampling Date: 12/17/03

Address: 178 Scenery Rd. Owner/Tenant: Jeff Nelson

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	12/17/03 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00055		
Location ID	BD-001404		
Sample Group (circle) (Subgroup of the property)	Garage, (House) Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement) (Ground Floor) Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	626583		
Flow Meter ID No.	B-1610 5-1521		
Start Time	1530 / 1533 / 1536	1539	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1532 / 1535 / 1538	1541	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments Cassette Lot Number: 23802	100 cm^2 Ground Level • garage entrance • Hardscape 100 cm^2 Ground Level • horizontal surfaces 100 cm^2 Ground Level • front entrance carpet Archive Blank (circle): Yes No	100 cm^2 Basement, concrete floor beneath entrance to crawlspace 100 cm^2 100 cm^2 12/17/03 Shawn Oliveira Archive Blank (circle): Yes No	100 cm^2 100 cm^2 100 cm^2 Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Jeff Nelson 12/17/03
Volpe/EPA Author: Shawn Oliveira
Activity: Post Cleanup Evaluation Sampling.
at 178 Scenery Rd. BD#001404.
Stationary Air and Dust Samples will
be collected per SAP Addendum, PCE
Sampling, CSS 12/1/03.
DryCal B-1610, S-1521 used to calibrate
low Vol pump used for Dust samples.
Equipment Ref pg 48 of this book.
825 Arrive onsite, Mrs. Nelson present.
841 CE-00052 started, placed on pump
and precalibrated Ref FSDS SA-000163.
843 CE-00053 placed on pump, precalibrated
and started. Ref FSDS SA-000164.
845 CE-00054 placed on pump, precalibrated,
and started. Ref FSDS SA-000170. JSO 12/17/03
Replicate of CE-00053.
857 Depart Site.
1145 Arrive at site. Perform flow and filter checks
on CE-00052, 53, 54. All ok.
1155 Depart Site.
1500 Arrive onsite, resident will be back in
10 minutes.
1512 Perform flow & filter checks on CE-00052,
53, 54. All ok.

Jeff Nelson Author: Shawn Oliveira 12/17/03
Volpe\EPA Post Cleanup Evaluation Sampling.
1518 Complete P.I.F.
1541 Dust Sample CE-00055 collected, capped,
and sealed. Ref FSDS D-000088.
1550 Depart site.
1800 Arrive onsite. Perform flow & filter
checks on CE-00052, 53, 54. All ok.
1945 Arrive onsite.
1950 CE-00052 collected, post-calibrated,
and sealed. Ref FSDS SA-000163.
1952 CE-00053 stopped, post-calibrated,
and sealed. Ref FSDS SA-000164.
1954 CE-00054 stopped, post calibrated, and
sealed Ref FSDS SA-000170.
2000. DCON Equipment, bag up PPE.
2014 Depart site.

12/17/03 Shawn Oliveira

52 Pearl St

BD# 002374

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 10-11 Site Visit Date: 1/16/04

Address: 52 Rural St. Structure Description: House

Occupant: Brothers Phone Number: 293-5706

Owner (if different than occupant): same Phone Number: same

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): MP ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	**Date Removal Completed: 05/03**	
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space (Basement) (Sub-floor) Other:	
Location of vermiculite remaining indoors	Attic (Walls (interior or exterior)) Crawl Space Basement Sub-floor None Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) Ground (Second) Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes (No) If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Will Receive HEPA Vac today
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other:_____	Did not receive vac yet
Heating Source	Wood/Coal Electric Propane/Gas Other: Fuel Oil	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months (3 to 4 months) 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Retired	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000218

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 10-11 Sampling Date: 1/16/04

Address: 52 Pearl St. Owner/Tenant: Brothers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (1/16/04)	Cassette 2 (1/16/04)	Cassette 3 (1/16/04)
Index ID	CE- 00065	CE- 00066	CE- 00067
Location ID	BA-002374	BA-002374	BA-002374
Sample Group	House	House	House
Location Description	Basement Bedroom	Ground level living Room (tag)	2nd level Hallway
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	(Indoor) Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	(25mm) 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	(Rotometer) DryCal NA
Pump ID Number	0891	0591.3	0387
Flow Meter ID No.	92045-1	92045-1	92045-1
Start Date	1/16/04	1/16/04	1/16/04
Start Time	0849	0851	0853
Start Flow (L/min)	9.01	9.01	9.01
Stop Date	1/16/04	1/16/04	1/16/04
Stop Time	2005	2009	2014
Stop Flow (L/min)	9.01	9.40	9.21
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	(No) Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	(No) Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)
Field Comments			
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JC / Entered (LFO) JB	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by GT	QC by JC

vs 101503

000103

Sheet No.: D-_____

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100305 Page No: 10-11 Sampling Date: 1/14/04

Address: 52 Pearl St. Owner/Tenant: Brothers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00068		
Location ID	BA-002374		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), (Second Level) Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces), (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (600)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	612058		
Flow Meter ID No.	R1610-515211	JP 1/16/04	
Start Time	1448 / 1452 / 1455	1458 / 1502 / 1505	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0 / 2.0	
Stop Time	1450 / 1454 / 1457	1500 / 1504 / 1507	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0 / 2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments Cassette Lot Number: 23902	100 cm^2 Living Room Floor @ front entrance 100 cm^2 - Kitchen top of microwave 100 cm^2 - Basement floor @ base of steps Archive Blank (circle): Yes No	100 cm^2 Basement - top of hot water heater 100 cm^2 - 2nd level floor in hallway 100 cm^2 - 2nd level N. Bedroom. Top of dresser Archive Blank (circle): Yes No	100 cm^2 100 cm^2 JP 1/16/04 100 cm^2 Archive Blank (circle): Yes No
Entered (LFO) JP	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by GP	QC by JP

vs 101503

10 52 Pearl St. Brothers 11/16/04

PCE-EPA/Volpe Gregory Parana CDM

Activity: Stationary air and dust samples will be collected as part of the PCE. Sampling will be conducted in level D PPE IAW SAP Addendum CSS, PCE 12/1/03. Equipment Ref Pg 48 of this logbook. 0840 Onsite @ 52 Pearl St. CE-00065 Pre-calibrated with Rotometer 92045-1. —— (D)

0849 CE-00065 started.

~~11/16/03~~ CE-00066 pre-calibrated.

0851 CE-00066 started.

CE-00067 pre-calibrated.

0853 CE-00067 started. Offsite.

1150 Onsite. Flow Ck-OK. Filter Ck-OK. PIF # BD-002374 completed with Mr. & Mrs. Brothers. Offsite. —— (D)

1435 Onsite. Filter Ck-OK. Flow Ck-OK. —— (D)

1507 CE-00068 (dust) collected. Pump decontaminated. Sample sealed. ——

11/16/04

11 52 Pearl St - Brothers 11/16/04

PCE-EPA/Volpe Author: Gregory Parana CDM

1710 Onsite. Filter/Flow ck-OK.

2000 Onsite. —— (D)

11/16/04 ~~2000~~ 2005 CE-00065 stopped, post calibrated.

2009 CE-00066 stopped, post calibrated. 11/16/04

2014 CE-00067 stopped, post calibrated. All samples ~~dtd~~ 11/16/04 sealed, equipment decontaminated. Offsite.

2030 Onsite @ CDM Office. Samples locked in sample storage. 2100 Offsite out of logbook. Ref FSDS SA-000216 D-000103

11/16/04

123 Hamann Ave

BD- 004341

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100305 Page No.: 18 Site Visit Date: 1/29/04

Address: 123 Hamann Ave Structure Description: House

Occupant: Cindy Sanderson-Smith Phone Number: 293-3451

Owner (if different than occupant): NA Phone Number: NA

Business Name: NA

Sampling Team: Shawn Oliveira

Field Form Check Completed by (100% of forms): gp gp

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 10/02
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other: –	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor None Other: UNKNOWN	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	*Driveway* (*Flowerbed*) *Garden* Stockpile (Yard) None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months (more than 6 months)	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week (More than once a week) Twice a month Once a month Less than once a month Other:_____	
Heating Source	(Wood) Coal Electric Propane/Gas Other:_____	
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months 3 to 4 months 5 to 6 months 4/30/05 more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA-000257

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100305 Page No: 18 Sampling Date: 1/29/04

Address: 123 Hamann Ave Owner/Tenant: Cindy Sandersen-Smith

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	so 1/29/04 Cassette 1	so 1/29/04 Cassette 2	Cassette 3
Index ID	CE- 00059	CE- 00060	
Location ID	so 1/29/04 BD- 004341	so 1/29/04 BD- 004341	
Sample Group	House	House	
Location Description	Living Room	Master Bedroom	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	05910	05912	
Flow Meter ID No.	006196	006196	
Start Date	1/29/04	1/29/04	
Start Time	842 ~~so 1/29/04~~	846 1/29/04	
Start Flow (L/min)	9.19 ~~so 1/29/04~~	9.19 1/29/04	
Stop Date	1/29/04	1/29/04	
Stop Time	so 1/29/04 ~~2057~~ 2057 ~~so 1/29/04~~	2059 1/29/04	
Stop Flow (L/min)	9.19 ~~so 1/29/04~~	9.19 1/29/04	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	• Wood stove in use • Resident smoking		
Cassette Lot Number:	316201		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ____ Entered (LFO) ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by:	QC by

vs 101503

Sheet No.: D- 000120

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100305 Page No: 15 Sampling Date: 1/29/04

Address: 123 Hamann Ave Owner/Tenant: Cindy Sanderson-Smith

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00115		
Location ID	BD- 004341		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), (Second Level) Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces), (High Traffic Areas) Other	Horizontal Surfaces, High Traffic Areas Other	Horizontal Surfaces, High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	612767		
Flow Meter ID No.	B-1610 S-1521		
Start Time	1501 / 1503 / 1505	1507	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1503 / 1505 / 1507	1509	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 - Front entrance - tile, ground level 100 cm^2 - Horizontal Surf. - ground level 100 cm^2 - Top of stairs - 2nd level, carpet	100 cm^2 - Horizontal Surf. - 2nd Level. 100 cm^2 100 cm^2	100 cm^2 100 cm^2 100 cm^2
Cassette Lot Number:	23802		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

12 Hamann Ave Cindy Sanderson-Smith 1/29/04
PCE-EPA/Volpe Author: Shawn Oliveira
Activity: Stationary Air and Dust samples will be collected as part of the P.C.E.. Sampling will be conducted in Level D PPE, IAW SAP Addendum CSS, PCE Sampling.
835 Arrive onsite, resident present. CE-00059 (Ground Level) set up and pre-calibrated.
840 CE-00059 started. Wood stove in use.
842 CE-00060 (2nd Floor) set-up and pre-calibrated.
843 CE-00060 started. ~~50~~
848 Offsite. ~~30~~
1130 Arrive onsite. Flow check ok, filter check ok.
1458 Arrive onsite Flow check ok, filter check ok.
1501 CE-00115 collected. (Dust)
1756 Arrive onsite. Flow check ok, filter check ok.
2045 Arrive onsite.
2051 CE-00059 stopped, post calibrated, and collected.
2059 CE-00060 stopped, post calibrated and collected.
2107 Return to CDM, lock samples in storage.
Ref FSDS's; SA-000237, D-000120.

1/30/04 19
PCE-EPA/Volpe Author: Shawn Oliveira
Activity: Stationary Air and Dust samples will be collected as part of the P.C.E. Sampling will be conducted in Level D PPE, IAW SAP Addendum CSS, PCE Sampling.
827 Arrive onsite, resident present. CE-00121 set up and pre-calibrated.
841 CE-00121 started.
843 CE-00122 set up, precalibrated and started.
845 CE-00123 set up, precalibrated and started duplicate of CE-00122.
847 CE-00124 set up, pre-calibrated, and started.
852 Complete PIF with resident.
1145 Arrive onsite, flow check ok, filter check ok. 30 1/30/04
1140 CE-00125 (Dust) collected.
1506 Arrive onsite flow check ok, filter check ok.
2038 CE-00121 stopped, post calibrated, and collected.
2040 CE-00122 stopped, post calibrated, and collected.
2041 CE-00123 stopped, post calibrated and collected.
2042 CE-00124 stopped, post-calibrated, and collected.
2050 Complete equipment DCON, depart site.
2057 Return to CDM, lock samples in storage. Ref FSDS's SA-000180, SA-000271, D-000135

1/30/04 Shawn Oliveira

100306

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ALL-WEATHER WRITING PAPER

TRANSIT

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No. 301

Libby Asbestos Project
Post ~~Evalua~~ Cleanup-Evaluation
12/15/03 to 2/2/04

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1306 Louisiana Ave

BD# 000299

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100306 Page No.: 2,3 Site Visit Date: 12/5/03

Address: 1306 Louisiana Ave Structure Description: House

Occupant: William Shiflett Phone Number: 293-4963

Owner (if different than occupant): N/A Phone Number: N/A

Business Name: N/A

Sampling Team: Shawn Oliveira

Field Form Check Completed by (100% of forms): MP GP

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	**Date Removal Completed:** 4/03	
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	Yes (No) If Yes, which floors: Basement Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes (No) If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other: Not received yet	
Heating Source	Wood/Coal Electric Propane/Gas Other: Oil	
Heat Distribution	(Forced air) - Radiant Other:	
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Within 1 week.
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes No (Unknown)	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	Unknown	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Retired	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION

Sheet No.: SA- 000144

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100306 Page No: 2, 3 Sampling Date: 12/15/03

Address: 1306 Louisiana Ave Owner/Tenant: William Shufflett

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1	Cassette 2	Cassette 3
	SO 12/15/03	SO 12/15/03	
Index ID	CE- 00043	CE- 00046	
Location ID	BD-000299	BD-000299	
Sample Group	House	Blank	
Location Description	Living Room	N/A	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS (FB) field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal (NA)	Rotometer DryCal NA
Pump ID Number	0689	N/A	
Flow Meter ID No.	95356-3		
Start Date	12/15/03		
Start Time	904 / 1154 / 1547		
Start Flow (L/min)	9.21 / 9.21 / 9.21		
Stop Date	12/15/03		
Stop Time	1153 / 1546 / 1546 12/16/03 2006	12/16/03	
Stop Flow (L/min)	9.21 / 9.21 / 9.21		
Pump fault? (circle)	(No) Yes NA	No Yes (NA)	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes (NA)	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			JP 12/16/03
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	JP 12/16/03 Archive Blank (circle): (Yes) No	Archive Blank (circle): Yes No
QC (Field Team) YU	Volpe:	Volpe:	Volpe:
Entered (LFO)	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000083

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100306 Page No: 2, 3 Sampling Date: 12/15/03

Address: 1306 Louisiana Ave Owner/Tenant: William Shiflett

Business Name: NA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Shawn Oliveira

Data Item	Cassette 1 (SO 12/15/03)	Cassette 2	Cassette 3
Index ID	CE- 00045		
Location ID	BD-000299		
Sample Group (circle) (Subgroup of the property)	Garage, (House) Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 NA (400)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	636583 ~~B-1610 - S-1521~~	SO 12/15/03	
Flow Meter ID No.	B-1610, S-1521	12/16/03	
Start Time	1554 / 1557 / 1600	1604	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1556 / 1559 / 1602	1606	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	12/16/03
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 Front Entrance Carpet 100 cm^2 Back Entrance Carpet 100 cm^2 Horizontal Surfaces - Bedrooms 100 cm^2 Bedroom Carpets	100 cm^2 100 cm^2 100 cm^2 12/16/03	100 cm^2 100 cm^2 12/16/03 100 cm^2
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) 20 70	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

BD# 000249

Residential Activity Log

Resident Address: 1306 LOUISIANA AVE LIBBY

Volunteer Name: WILLIAM & JOANNE SHIFLETT

Sampling Date(s): 12-15-03

Personal air sample number (s): Stationary Air - CE-00043

FSDS number(s): SA-000144, D-000083

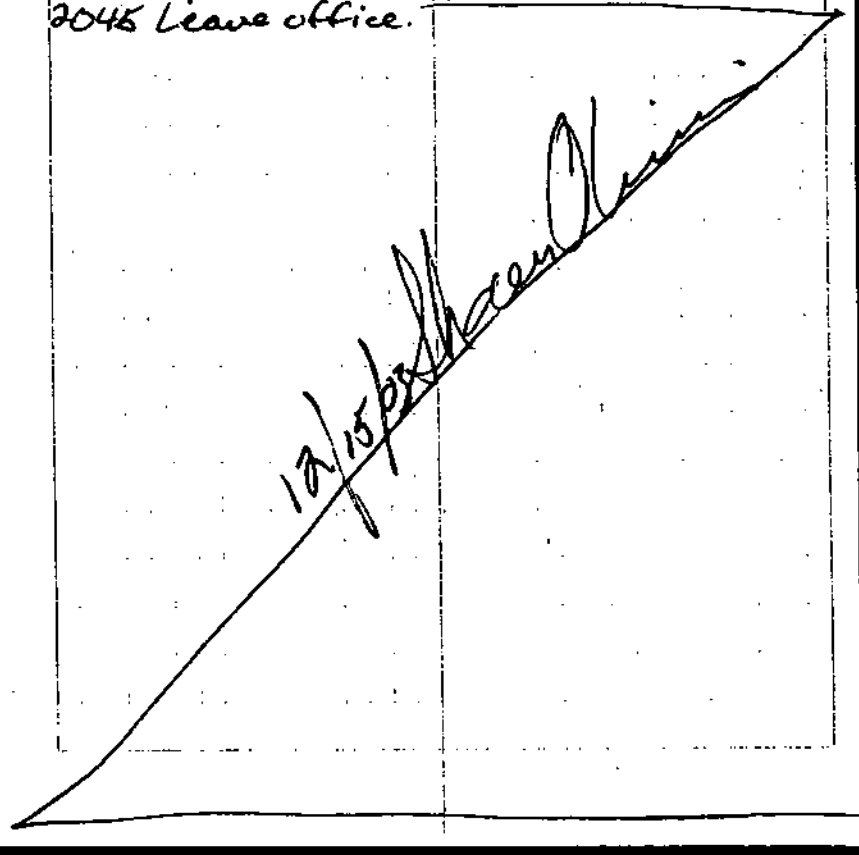
Date/Time Interval	Go Outside?	Pump problem?	General Activities
12-15-03 11:50 AM 13:50 PM	No Yes (1 HR mins) Describe	No ✓ Yes (describe)	OUT FOR COFFEE
12-17-03 0500 TO 530	No Yes (30 mins) Describe	No ✓ Yes (describe)	EPA MEATING
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

William Shiflett Author: ShawnOliveira 12/15/03
1306 Louisiana Volpe/EPA
Post Removal Evaluation.
Activity: Post Removal Evaluation Sampling at BD-000299, 1306 Louisiana Ave.
Stationary Air and Dust Samples will be collected in accordance with the SAP Addendum, PCE Sampling, 12/1/03.
Dry Cal B-1610, S-~~1524~~ 1521 JO 12/15/03 used to calibrate low volume sampling pump for Dust sampling.
Equipment referena pg 4 of this book
850 Arrive onsite, Mr. + Mrs. Shiflett present.
857 Set-up and calibrate CE-00043.
904 Start CE-00043 on Pump # 0689.
915 Depart Site.
1153 Arrive Onsite. Flowcheck CE-00043 ok. Some discoloration on the filter. Residents are smoking heavily.
1159 Depart Site.
1546 Arrive at Site Flowcheck CE-00043, ok. Filter discolored. Residents still smoking. Complete P.I.F. Resident will receive HEPA Vac this afternoon.
1602 SO 12/15/03 Collect Dust Sample CE-00045, capped, and sealed. Refer to FSDS D-000083.
1615 Depart Site

12/15/03 Shawn Oliveira

William Shiflett Author: Shawn Oliveira
1306 Louisiana Volpe/EPA 12/15/03
2002 Arrive at site, Mr. + Mrs. Shiflett present.
2006 CE-00043 Stopped, post-calibrated and sealed. Filter dark with cig smoke Ref. FSDS SA-000144.
2008 CE-00046. Blank. Ref FSDS SA-000144
2010 DCON equipment, depart site.
2040 Paperwork
2045 Leave office.



653 Flower Creek Rd

BD# 003103

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100306 Page No.: 4-5 Site Visit Date: 1/16/04

Address: 653 Flower Creek Rd. Structure Description: Brown

Occupant: Buzzy and Docis Brown Phone Number: 293-4663

Owner (if different than occupant): same Phone Number: same

Business Name: NA

Sampling Team: PARANA-CDM

Field Form Check Completed by (100% of forms): JP PS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 10/03
Location of vermiculite removed indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor Other: (NONE)	NONE inside
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	None remaining
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile (Yard) None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months (3 to 4 months) 5 to 6 months more than 6 months	JP 1/16/04 Recieved HEPA vac 1/10/04
How often do you vacuum with your EPA *provided HEPA vacuum?*	(Once a week) More than once a week Twice a month Once a month Less than once a month Other:	
Heating Source	(Wood/Coal) (Electric) Propane/Gas Other:	
Heat Distribution	Forced air (Radiant) Other:	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	JP 1/16/04 None No Forced Air heating present
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	6356 Pipe Creek Rd. Sons House in Kalispell	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	~~None~~ JP 1/16/04 Plummer School ASA Wood School Central School	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION

Sheet No.: SA- 000215

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100306 Page No: 4-5 Sampling Date: 1/16/04

Address: 653 Flower Creek Rd. Owner/Tenant: Brown

Business Name: NIA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00063	CE- 00064	
Location ID	BD-003103	BD-003103	TC
Sample Group	House	~~House~~ basement	1/20/04
Location Description	Ground level Hallway	Basement - Center	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	0689	0891-A	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/16/04	1/16/04	
Start Time	0825	0827	
Start Flow (L/min)	9.01	9.01	
Stop Date	1/16/04	1/16/04	
Stop Time	1940	1946	
Stop Flow (L/min)	9.40	9.20	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear - NA
Field Comments			Fp 1/16/04
Cassette Lot Number:	3415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) TC	Volpe:	Volpe:	Volpe:
Entered (LFO) JB	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

000104

Sheet No.: D- ____

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100306 Page No: 4-5 Sampling Date: 1/16/04

Address: 653 Flower Creek Rd. Owner/Tenant: Brown

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: ~~MACTEC~~ (CDM) Other ____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00069		CE- 00070
Location ID	BD-003103	BD-003103	BD-003103
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other ____	Garage, House, Shed, Pump House Other ____	Garage, (House), Shed, Pump House Other ____
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), Second Level Other ____	Basement, Ground Floor, Second Level Other ____	Basement, Ground Floor, Second Level Other N/A
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other ____	Horizontal Surfaces High Traffic Areas Other ____	Horizontal Surfaces High Traffic Areas Other N/A
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS (FB-(field blank)) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 ~~300 NA~~ (400)	100 200 300 NA	100 200 300 (NA)
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	(25mm) 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	(TEM- .45) PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal (NA)
Pump ID No.	612058		N/A
Flow Meter ID No.	B1610 S1521		
Start Time	1418 / 1423 / 1428 / 1431		
Start Flow (L/min)	2.0 / 2.0 / 2.0 / 2.0		
Stop Time	1420 / 1425 / 1430 / 1433		
Stop Flow (L/min)	2.0 / 2.0 / 2.0 / 2.0		
Pump Fault? (circle)	(No) Yes	No Yes	~~No Yes~~
Field Comments / Cassette Lot Number: 23807	100 cm^2 - Kitchen Floor; 100 cm^2 - Living Room TV Stand; 100 cm^2 - Basement Floor; Archive Blank (circle): Yes No	100 cm^2 - Basement - top of freezer; 100 cm^2; 100 cm^2; Archive Blank (circle): Yes No	100 cm^2; 100 cm^2; 100 cm^2; Archive Blank (circle): (Yes) No — NO TR 1/22/04
Entered (LFO) JB	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

Initials/dates: 1/17/04 (Cassette 1 and Cassette 3 headers); 1/16/04 (Cassette 2 column, start/stop rows, Cassette 3 comments)

For Field Team Completion (Provide Initials)	Completed by LC	QC by TR

vs 101503

653 Flower Creek Rd. - Brown 11/6/04

PCE-EPA/Volpe Author: Gregory Paviana COM

Activity: Stationary Air and dust samples will be collected as part of the PCE. Sampling will be conducted in level D PPE IAW SAP, Addendum, CSS, PCE 12/1/03. Equipment: 3 high volume sampling pumps - 2 low volume sampling pumps, tygon, Cassette stands, 0.8 um PCM cassettes 0.45 um microvacuum dust cassettes, 10x10 cm Templates, baggies, Rotometer 92045-1, Dry Cal B1610-S1521 Decon wipes.

0820 Onsite. CE-00063 pre-calibrate.

0825 CE-00063 started. CE-00064 pre-calibrated.

0827 CE-00064 started. Offsite to 52 Peirl St.

1130 Onsite Filter Ck-OK. Flow Ck.-OK. PIF BD-003103 completed with Barry and Doris Brown.

1415 Onsite. Filter Ck - Filter loading with wood smoke - Wood heat.

1433 CE-00069 (Dust) collected.

11/6/04

653 Flower Creek Rd. Brown 11/6/04

PCE-EPA/Volpe Author: Gregory Paviana COM

CE-00070 - Blank exposed. All samples (dust) sealed. Resident not present.

1650 Onsite. Filter Ck - OK Loaded with wood smoke. Flow Ck - OK. Offsite.

1940 CE-00063 stopped, post calibrated and sealed.

1946 CE-00064 stopped, post calibrated and sealed. Late Entry. 0800 - LV pump 612058 calibrated to Dry Cal B1610-S1521 prior to day's sampling.

2030 Onsite CDM office. All equipment was decontaminate at the site. Samples locked in sample storage @ CDM Office. Ref FSDS D-000104, SA-000215. Out of logbook @ 2100.

11/6/04

240 West Larch Street

6 240 W. Lurch St. - Reisman 1/17/04
PCE - EPA / Volpe Author: Gregory Parsons
Activity: Stationary Air and dust samples will be collected as part of the PCE. Sampling will be conducted in level D PPE IAW ~~11/17/03~~ SAP, Addendum, CSS, PCE Sampling 12/1/03. Ref pg 4 for equipment. Rotometer #2045-1 used to calibrate samples.
0825 Onsite CE-00071 pre-calibrated.
CE-00072 pre-calibrated.
CE-00072 field replicate of CE-00071.
0836 CE-00071, 72 started. Offsite.
1130 Onsite. Resident, David Steele unplugged pumps and stated that they were to noisy. He ~~de~~ 1/17/04 said to take them out of his house and that he does not want to participate. 1200 Out of log book FSDS SA-00035 voided.

1/17/04

214 W. Larch

BD# 000798

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100306 Page No.: 7-8 Site Visit Date: 2/2/04

Address: 214 W. Lurch St. Structure Description: House

Occupant: Ami & Chad Depue. Phone Number: 293-5494

Owner (if different than occupant): Arthur Skoggs Phone Number: Unknown

Business Name: N/A

Sampling Team: PARANA-CDM

Field Form Check Completed by (100% of forms): MP PS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		Date Removal Completed: 05/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement (Sub-floor) Other:	
Location of vermiculite remaining indoors	Attic (Walls (interior or exterior)) Crawl Space Basement Sub-floor None Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) (Ground) Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months (more than 6 months)	
How often do you vacuum with your EPA provided HEPA vacuum?	(Once a week) More than once a week Twice a month Once a month Less than once a month Other:_____	
Heating Source	(Wood/Coal) (Electric) Propane/Gas Other:_____	
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	~~Immediately~~ 1 to 2 months 3 to 4 months ~~5 to 6 months~~ more than 6 months 4p 2/2/04	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	711 Michigan Farm to Market Rd.	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	- Self Employed	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000183

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100306 Page No: 7-8 Sampling Date: 2/2/04

Address: 214 W. Lurch St. Owner/Tenant: DePue

Business Name: N/A Skoglas, Arthur

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Parana

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00118		
Location ID	BD-000798		
Sample Group	House		
Location Description	Kitchen		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	05913		
Flow Meter ID No.	92045-1		
Start Date	2/2/04		
Start Time	0825		
Start Flow (L/min)	9.03		
Stop Date	2/2/04		
Stop Time	1948		
Stop Flow (L/min)	9.03		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type -	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	Overloaded from sewt. Volunteer fixed fire in basement @1830.		
Cassette Lot Number:	310201		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team)	Volpe:	Volpe:	Volpe:
Entered (LFO)	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 00134

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100306 Page No: 7-8 Sampling Date: 2/2/04

Address: 214 W. Larch St. Owner/Tenant: DePue

Business Name: N/A Skoglas, Arthur

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00119		
Location ID	BD-000798		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	~~Horizontal Surfaces~~ (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	666248	2/2/04	
Flow Meter ID No.	B1610-S1521		
Start Time	1239 / 1242 / 1245	1248	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1241 / 1244 / 1247	1250	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0 2/2/04	
Pump Fault? (circle)	(No) Yes	No Yes 2/2/04 No Yes	
Field Comments Cassette Lot Number: 23802	100 cm^2 Ground level floor of living room 100 cm^2 - Living Room window sill 100 cm^2 - Basement floor Archive Blank (circle): Yes No	100 cm^2 - Basement top of furnace 100 cm^2 100 cm^2 Archive Blank (circle): Yes No	100 cm^2 100 cm^2 2/2/04 100 cm^2 Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

214 W. Larch St - DePue 2/2/04 7
PCE - EPA/Volpe Author: Gregory Parana COM.
Activity: Stationary Air and Dust samples will be collected in BA-000798. Stationary air sample will not be collected in the basement due to equipment limitations. 0705 LV pump 666248 calibrated with Dry-cal @ COM office. Equipment: Ref pg 4. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, PCE Sampling 12/1/03.
0817 Onsite. CE-00118 pre-calibrated.
0825 CE-00118 started (Kitchen).
1030 Onsite. Flow Ck-OK, Filter Ck-Ok.
1250 CE-00119 (dust) collected.
CE-00118 flow Ck-Ok. Filter slightly discolored from wood burning stove.
1545 Onsite. Flow Ck-Ok.
Filter Ok.
1803 Onsite. Flow ck-OK. Filter Ok.

2/2/04

214 W. Larch St. - Depue 2/2/04
PCE - EPA/Volpe Gregory Parana COM
1940 Onsite. CE-00118 overloaded.
Resident stated that the wood
burner ~~was~~ 2/2/04 backing
scent into house when wood
was added @ 1830.
1948 CE-00118 stopped, post
calibrated and sealed.
2015 2/2/04. Equipment deconned.
2015 Onsite CDM office. Ref
FSDS SA-000183, D-000131
REF # BD-000798. Samples
placed in sample storage.
2030 Out of log book.

2/2/04

100301

"Rite in the Rain"®

ALL-WEATHER

Environmental FIELD BOOK

No. 550

Libby Asbestos Project

Post-Cleanup Evaluation Sampling

11/20/03 – 1/30/04

"Rite in the Rain"

ALL-WEATHER WRITING PAPER

ALL-WEATHER

ENVIRONMENTAL FIELD BOOK

Name _____

Address _____

Phone _____

Project _____

This book is printed on "Rite in the Rain" All-Weather Writing Paper - A unique paper created to shed water and enhance the written image. It is widely used throughout the world for recording critical field data in all kinds of weather. For best results, use a pencil or an all-weather pen.

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143 Crossway Ave

BD# BD-002969

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100301 Page No.: 10 Site Visit Date: 12/8/03

Address: 143 Crossway Ave. Structure Description: House

Occupant: Gordon Sullivan Phone Number: 293-8496

Owner (if different than occupant): N/A Phone Number: N/A

Business Name: Focal Point

Sampling Team: PARANA · CDM

Field Form Check Completed by (100% of forms): MP gp

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 7/03
Location of vermiculite removed indoors	(Attic) (Walls (interior or exterior)) Crawl Space Basement Sub-floor Other:	Walls in front Room, Dining Room and Downstairs office
Location of vermiculite remaining indoors	Attic (Walls (interior or exterior)) (Crawl Space) Basement Sub-floor None Other:	Above fireplace Kitchen, bathroom, laundry room
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Ground) First (Second) Garage Other: Attic	
Was carpet removed during removal activities?	(Yes) No NA	
Location of vermiculite removed outdoors	(Driveway) (Flowerbed) (Garden) Stockpile (Yard) None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard None Other: Under Deck	Material Enclosed

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after removal was completed did used of EPA issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months (5 to 6 months) more than 6 months	Rainbow Vac used weekly after ~~removal~~ 12/9/03 after removal conducted
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week (More than once a week) Twice a month Once a month Less than once a month Other: 12/9/03	
Heating Source	(Wood/Coal) (Electric) (Propane/Gas) Other: Fuel Oil	
Heat Distribution	(Forced air) (Radiant) Other:	FA - Fuel Oil Rad - Propane
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months (3 to 4 months) 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	(Yes) No Unknown	Explain: - Wiring in crawlspace - Installing door in dining room - Dining room wall - Fireplace
Addresses of other homes or properties where the occupants visit and may contain vermiculite	1322 Utah Ave.	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	N/A out of home and studio in back yard.	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION Removal of material (VCL) conducted by the resident with a non-hepa equipped shop vac.

Sheet No.: PA- 000023

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Field Logbook No: 100301 Page No: 6/7/8 Sampling Date: 12/8/03

Address: 143 Crossway Ave. Owner/Tenant: Sullivan

Business Name: Focal Point

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Person Sampled: Gordon Sullivan SNN: 1735 Task: Post Clean Up Evaluation

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00004		
Location ID	BD-002969		
Sample Group	House		
Location Description	Shoulder		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor	Indoor Outdoor	Indoor Outdoor
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	666023	626752	
Flow Meter ID No.	92045-1	92045-1	
Start Date	12/8/03	12/8/03	
Start Time	0824	1344	
Start Flow (L/min)	3.08	3.08	
Stop Date	12/8/03	12/8/03	
Stop Time	1340	1924	
Stop Flow (L/min)	2.89	2.89	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	TWA EXC (NA)	TWA EXC (NA)	TWA EXC NA
Field Comments	316 min x 2.99 L/min = 945 L	340 min x 2.99 L/min = 1017 V_T = 1962 L	
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) MR	Volpe:	Volpe:	Volpe:
Entered (LFO) DY	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000121

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 00301 Page No: 6,7,8 Sampling Date: 12/8/03

Address: 143 Crossway Ave. Owner/Tenant: Sullivan

Business Name: Focal Point

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (12/10/03)	Cassette 2	Cassette 3
Index ID	CE- 00005		
Location ID	BD-002969		
Sample Group	House		
Location Description	Dining Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2135		
Flow Meter ID No.	92045-1		
Start Date	12/8/03		
Start Time	0834		
Start Flow (L/min)	4.05		
Stop Date	12/8/03		
Stop Time	1936		
Stop Flow (L/min)	3.86		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	662 min x 3.962 l/min = 2622 l	CE-00005 sample period = 12/10, 12/9, 12/8	
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) DM	Volpe:	Volpe:	Volpe:
Entered (LFO) [illegible]	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

1 of 3

Sheet No.: SA- 000122

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 6,7,8 Sampling Date: 12/8/03

Address: 143 Crossway Ave. Owner/Tenant: Sullivan

Business Name: for 12/2/03 focal point

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00006		
Location ID	BD-002969		
Sample Group	House		
Location Description	2nd level Master Bedroom Doorway		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	12/2/03 2141		
Flow Meter ID No.	92045-1		
Start Date	12/8/03		
Start Time	0840		
Start Flow (L/min)	4.05		
Stop Date	12/8/03		
Stop Time	1931		
Stop Flow (L/min)	4.05		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	651 min X 4.05 L/min = ~~23~~ 12/9/03 2637L	CE-00006 sample period = 12/10, 12/9, 12/8	
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JR Entered (LFO) JS	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: PA- 000026

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Field Logbook No: 100301 Page No: 9-12 Sampling Date: 12/9/03

Address: 143 Crossway Ave. Owner/Tenant: Sullivan

Business Name: Focal Point

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: ~~MACTEC~~ (CDM) Other _____ Names: PARANA

Person Sampled: ~~Gordon~~ Gordon Sullivan SNN: 1735 Task: Post Clean Up Evaluation

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00007		
Location ID	BD-002969		
Sample Group	House		
Location Description	Shoulder		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor	Indoor Outdoor	Indoor Outdoor
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	626752	626614	
Flow Meter ID No.	92045-1	92045-1	
Start Date	12/9/03	12/9/03	
Start Time	0837	1454	
Start Flow (L/min)	3.08	3.08	
Stop Date	12/9/03	12/9/03	
Stop Time	1451	1750	
Stop Flow (L/min)	3.08	2.89	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	TWA EXC (NA)	TWA EXC (NA)	TWA EXC NA 12/10/03
Field Comments	374 min x 3.08 L/min = 1152 L	176 min x 2.99 L/min = 526 L V_T = 1678 L	CE-00007 ~~was~~ sample period 12/10, 12/9
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) DR Entered (LFO) PD	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000127

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 9-12 Sampling Date: ~~12/8/03~~ 12/9/03 ~~12/10/03~~

Address: 143 Crossway Ave Owner/Tenant: Sullivan

Business Name: Focal Point

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE-00006 (cont.)		
Location ID	BD-002969		
Sample Group	House		
Location Description	2nd level W/master Bedroom Doorway		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2135		
Flow Meter ID No.	92045-1		
Start Date	12/9/03		
Start Time	0849		
Start Flow (L/min)	4.05		
Stop Date	12/9/03		
Stop Time	1801		
Stop Flow (L/min)	4.05		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	552 x 4.05 L/min = 2236 L	CE-00006 sample period = 12/10, 12/9, 12/8	
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) DR Entered (LFO) PS	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000069

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 10301 Page No: 15 Sampling Date: 12/10/03

Address: 143 Crossway Ave. Owner/Tenant: Sullivan

Business Name: Focal Point

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00009		
Location ID	BA-002969		
Sample Group (circle) (Subgroup of the property)	Garage (House) Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor) Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 NA (400)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	P 51610 51621 61205 12/10/03		
Flow Meter ID No.	B1510, 51621		
Start Time	1547 / 1551 / 1559	1602	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1549 / 1553 / 1601	1604	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments Cassette Lot Number: 23802	100 cm^2 - Ground level Front Room on fireplace 100 cm^2 - Ground level Hallway floor 100 cm^2 - 2nd level Hallway floor Archive Blank (circle): Yes No	100 cm^2 - 2nd level Office Floor 12/10/03 Top of wall mount heater 100 cm^2 100 cm^2 Archive Blank (circle): Yes No	100 cm^2 100 cm^2 100 cm^2 Archive Blank (circle): Yes No
Entered (LFO) DA JS	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

12/10/03

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Spranos 00001
SP-002969

Residential Activity Log

Resident Address: 143 Crossway Ave.

Volunteer Name: Gordon Sullivan

Sampling Date(s): 12/8/03

Personal air sample number (s): CE-00004

FSDS number(s): PA-000023, SA-000121, SA-000122

Date/Time Interval	Go Outside?	Pump problem?	General Activities
8:30 AM 12:30 - PM	(No) Yes (___ mins) Describe	(No) Yes (describe)	Work in office upper level
12:30 PM 2:30 PM	(No) Yes (___ mins) Describe	(No) Yes (describe)	Work in office upper level
2:30 P.M 3:30 PM	(No) Yes (___ mins) Describe	(No) Yes (describe)	Work on fireplace Rock work - Lizard
3:30 PM 4:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	General - work clean up -
4:30 " 7:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	General - Dinner work in office S.I Around.
	No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

Greg Parang
293-1759

~~BKD~~ 12/9/03
BD-002969

Residential Activity Log

Resident Address: 143 Crossway Ave

Volunteer Name: Gordon Sullivan

Sampling Date(s): 12/9/03

Personal air sample number (s): CE-00007

FSDS number(s): SA-000126, SA-000127, PA-000026

Date/Time Interval	Go Outside?	Pump problem?	General Activities
8:34 12:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Work in office upper level -
12:30 2:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Rock work - fireplace - out
2:30 4:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Work in office upper level
4:30 6:00	(No) Yes (___ mins) Describe	(No) Yes (describe)	Work in back hallway - moving things around
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

BD# 002969

Residential Activity Log

Resident Address: 143 Crossway Ave.

Volunteer Name: Gordon Sullivan

Sampling Date(s): 12/10/03

Personal air sample number (s): CE-00007

FSDS number(s): PA-000027 - SA-000128, 141

Date/Time Interval	Go Outside?	Pump problem?	General Activities
8:30 9:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	work around fireplace
out	No Yes (___ mins) Describe	No Yes (describe)	
12:00 2:00	No Yes (___ mins) Describe	No Yes (describe)	work in office upper level
2:00 3:30	(No) Yes (___ mins) Describe –	(No) Yes (describe) –	Construction downstairs Fireplace –
3:30 6:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	work in office
– 6:30 7:00	(No) Yes (___ mins) Describe – –	No Yes (describe)	– Ate Mc Cal + Drink wine

Note: Continue on second page if necessary.

3 of 3

Sheet No.: SA- 000128

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 13-17 Sampling Date: 12/10/03

Address: 143 Crossway Ave. Owner/Tenant: Sullivana

Business Name: Focal Point

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE-00005 (cont.)		CE- 00008
Location ID	BD-002969		BD-002969
Sample Group	House		Blank
Location Description	Dining Room		N/A
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS (FB-(field blank)) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	(Indoor) Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	(25mm) 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 (PCM- 0.8)
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal (NA)
Pump ID Number	2135		N/A
Flow Meter ID No.	92045-1		
Start Date	12/10/03		
Start Time	~~12/10/03~~ 0850 ~~1112~~		
Start Flow (L/min)	4.05 ~~4.05 12/10/03~~		
Stop Date	12/10/03		
Stop Time	~~12/10/03~~ ~~0940~~ 1838		
Stop Flow (L/min)	4.05 ~~4.05 12/10/03~~		12/10/03
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes (NA)
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes (NA)
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear (NA)
Field Comments	588 min x 4.052 l/min = 2381 l	CE-00005 sample period = 12/10, 12/9, 12/8	
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes (No)
QC (Field Team) DR Entered (LFO) JS	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials) ___	Completed by	QC by

vs 101503

6

143 Crossway Ave.

Location Sullivan Date 12/8/03

Project / Client Post Cleanup Evaluation - EPA/Volpe

Author: Gregory Parana CDM

Activity: Personal air sample will be collected on Gordon Sullivan. Ambient air samples will be collected on the inside of the house BD-002969. All sampling will be conducted IAW SAP Addendum, Post Cleanup evaluation Sampling, CSS 11/13/03.

Equipment: 4 high volume • 4 Low volume air sampling pumps, rotometer 92045-1, cassette stands, GFI, 0.8µm PCM cassettes, decon wipes, screw driver, flash light, tyson, sample pump pouch.

0800 Onsite: Gordon / Kathy Sullivan present.

0815 CE-00004 attached to pump 666023 calibrated with rotometer 92045-1.

0824 CE-00004 started. Residential activity log orientation conducted. Low vol sampling pump orientation conducted.

0830 CE-00005 attached to pump 2135 pre-calibrated.

0834 CE-00005 started. (Dining Room)

0838 CE-00006 attached to pump 2141 pre-calibrated

12/8/03

143 Crossway Ave

Location Sullivan Date 12/8/03

Project / Client Post Cleanup Evaluation-EPA/Volpe

Author: Gregory Parana CDM

0840 CE-00006 started. (2nd level)

0855 Offsite. 1110 Onsite.

1115 CE-00005 calck - OK.

1118 CE-00006 calck - OK.

1120 CE-00004 calck - OK.

1125 Offsite.

1310 Weather 30°F 1mph wind E-W

1335 Onsite.

1340 CE-00004 stopped and post calibrated. CE-00004 attached to pump and pre-calibrated sample. Sample placed on volenteer.

1344 CE-00004 started. Morning shift - Gordon worked in his office on the 2nd level. CE-00005, 06 were calibrated and no change was noted in the flowrates. CE-00005 in dining room adjecent to the fireplace and ceiling fan which is on. Kathy Sullivan was painting in the fireplace room. Offsite

12/8/03

143 Crossway Ave

Location Sullivan Date 12/18/03

Project / Client Post Clean Up Evalution EPA-Volpe

Author: Gregory Parana

1715 Onsite. Gordon indicated that he cond rock work on fireplace. Filter (CE-00004) discolored. Visible particulate noted on filter. Flow rate checked with no change. CE-00006 filter checked-OK. Flowrate checked OK.

1726 CE-00005 filter noted visible particulate on filter. No discoloring. Flowrate checked-OK.

1736 Offsite. ———— (D)

1920 Onsite. 1924 CE-00004 stopped, capped, and post calibrated. CE-00004 sealed ~~with CoC~~ /p 12/18/03

1931 CE-00006 stopped, capped and post calibrated. Filter looked OK.

1936 CE-00005 stopped, capped and post calibrated. Filter slightly loaded. Equipment decontaminated.

1950 Offsite to COM office. Ref FSDS PA-000023, SA-000121, 22.

2015 Placed samples in sample storage room and locked. Out of logbook

12/18/03

Sullivan

Location 143 Crossway Ave. Date 12/19/03

Project / Client Post Clean Up Evaluation-EPA-Volpe

Author: Gregory Parana COM

Activity: Day 2 of personal air sampling on Gordon Sullivan and ambient air sampling inside of BD-002469. A new cassette was placed on Gordon due to the loading on sample CE-00004. This is a deviation to the SAP. Sampling will be conducted in accordance with SAP Add., Post Clean Up evaluation Sampling, CSS 11/13/03. Ref pg 6 of this logbook for equipment. ———— (D)

0820 Onsite. Gordon present. Pump 626752 pre-calibrated with sample CE-00007 and rotometer 92045-1. Sample placed on GS.

0837 CE-00007 started. ———— (D)

High Vol pump 2141 and 2135 plugged in & started to warm up. Pump 2141 pre-calibrated with sample CE-00005 in line. ———— (D)

0845 CE-00005 started. ———— (D)

12/19/03

Sullivan

Location 143 Crossway Ave. Date 12/9/03

Project / Client Post Clean Up Evaluation - EPA-Volpe

Author: Gregory Parana CDM

0848 Pump 2135 pre-calibrated with CE-00006 in line.

0849 CE-00006 started.

0855 Pre-Sampling Interview Form (PIF) completed with Gordon and Kathy Sullivan. Residential Activity log given to resident.

0915 Offsite.

0945 Weather: 24°F Wind 2 mph E→W

1115 Onsite.

1120 CE-00005 flow ck-OK ~~Cal~~ CE-OK. 12/9/03

1125 CE-00006 flow ck-OK ~~Cal ck OK~~. 12/9/03

1128 CE-00007 ~~Cal ck~~ 12/9/03 flow ck.-OK GS was observed working in 2nd level office.

1137 Offsite. CDM office completing paperwork.

1445 Onsite.

1451 CE-00007 stopped, capped and post calibrated. Sample attached to pump 626614 a calibrated to 3.08 l/min.

1454 CE-00007 started.

12/9/03

Sullivan

Location 143 Crossway Ave Date 12/9/03

Project / Client Post Clean Up Evaluation - EPA-Volpe

Author: Gregory Parana CDM

1458 CE-00006 Flow ck - OK Filter slightly discolored.

1503 CE-00005 Flow ck - Ok. Filter discolored with visible particulate. 1515 Offsite.

1745 Onsite. 1750 CE-00007 stopped and post calibrated. Cassette capped and bagged Visible particulate noted, loading not as heavy as CE-00004. CE-00007 will be used on 12/10/03.

1755 CE-00005 stopped, post calibrated and capped.

1801 CE-00006 stopped, capped, post calibrated and bagged. Equipment decontaminated. Recieved completed residential activity log from GS. Ref FSDS SA-000127, 126, PA-000026.

1810 Offsite. To CDM office. Samples locked in sample storage.

12/9/03

12

Sullivan
Location 143 Crossway Ave. Date 12/9/03
Project / Client Post Removal Evaluation - EPA-Volpe
Author: Gregory Parana CDM

1900 Out of logbook. ——— GP
2000 CDM office - Paperwork.
calling scheduled volunteers to set up a time so I can take the EPA furnished HEPA vacs. Contacted all residents. HEPA vacs scheduled to be delivered tomorrow 12/10/03.
2050 Out of logbook. ———

12/9/03

Sullivan
Location 143 Crossway Ave. Date 12/10/03
Project / Client Post Removal Evaluation EPA-Volpe
Author: Gregory Parana CDM 12/10/03

Activity: Day 3 of Post Cleanup evaluation sampling @ BD-002969 Personal air, stationary air, and dust samples will be collect in accordance with the SAP Addendum, PCE Sampling; CSS 12/1/03. Equipment reference pg 6 of this logbook Dry Cal B-1610, S-1521 used to calibrate low volume sampling pump for dust samplings. ——— GP
0830 Onsite Gordon and Kathy Sullivan present. Low vol pump 666023 calibrated with sample in line CE-00007 - Rotometer 82045-1.
0841 CE-00007 started. Sample placed on Gordon. ——— GP
Sample CE-00005 placed on pump 2135 and pre-calibrated.
0850 CE-00005 started. ——— GP
Sample CE-00006 placed on pump 2141 and pre-calibrated.
0855 CE-00006 started. Activity log given to GS. ——— 12/10/03

Sullivan
Location 143 Crossway Ave. Date 12/10/03
Project / Client Post Removal Evaluation - EPA/Volpe
Author: Gregory Parana CDM

0910 Offsite.
1130 Onsite. Gordon indicated that he left and placed pump on hold from 0940 until 1110. Pump counter used to ~~verify~~ 12/10/03 ~~verified~~ verify time sample was off.
1135 CE-00007 calibrated ck - OK. Filter discolored and x40% loaded.
1140 CE-00005 calibrated ck - OK Filter Ck - OK.
CE-00006 cal ck - OK, Filter Ck OK. GS completing rock work on fireplace.
1150 Offsite. CDM Office.
1300 Low vol pump 12/10/03 612058 calibrated with dry-cal. 0.45 um TEM dust sample cassette lot #23802.
Late Entry 1030 HEPA vac S/N 0328001333 to Anne Pescatore 607 W. 10th St. 1100 HEPA vac S/N 0328001330 to Jim Allen 1109 Louisiana Ave.
1400 Completing paper work @ CDM Office.

12/10/03

Sullivan
Location 143 Crossway Ave. Date 12/10/03
Project / Client Post Removal Evaluation - EPA/Volpe
Author: Gregory Parana CDM

1525 Onsite. GS work in front room on fireplace rock work.
1530 CE-00007 stopped. Post calibrate. CE-00007 placed on pump 626614 and calibrated
1535 CE-00007 started.
1542 CE-00005 flow Ck OK.
1544 CE-00006 flow Ck - OK.
1601 Dust sample CE-00009 collected, capped and sealed. Ref FSDS D-000069.
1612 Offsite to 1116 Utah Ave to deliver HEPA vac.
1630 HEPA Vac S/N 0328001331 relinquished to Mary England. Orientation conducted.
1700 Offsite.
1830 Onsite 143 Crossway Ave.
1836 CE-00007 stopped post calibrated and sealed.
1838 CE-00005 stopped, post calibrated and sealed.
1841 CE-00006 stopped, post calibrated and sealed.

12/10/03

16

Sullivan

Location 143 Crossway Ave. Date 12/10/03

Project / Client Post Removal Evaluation sampling EPA-Volpe

Author: Gregory Parana CDM

Equipment decontaminated. Resident Activity log received from GS.

1855 Offsite to CDM office. Samples locked in sample storage @ 318 Louisiana Ave. ~~Out of logbook.~~ 12/10/03

Ref FSDS PA-000027-SA-000128, 141. Out of logbook. ⊗

12/10/03

Sullivan

Location 143 Crossway Ave. Date 12/11/03

Project / Client Post Removal Evaluation sampling EPA-Volpe

Author: Gregory Parana CDM

1100 Field QC of FSDS conducted by Damon Repine.

1151 Relinquished samples to Terry Crowell, CDM.

1200 Out of logbook.

12/11/03

620 Utah Ave

1p 1/8/04

BD# 0002177

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100301 Page No.: 27 Site Visit Date: 1/8/04

Address: 620 Uthe Ave. Structure Description: House

Occupant: Roland Childs Phone Number: 293-4026

Owner (if different than occupant): N/A Phone Number: N/A

Business Name: N/A

Sampling Team: PARANA - COM

Field Form Check Completed by (100% of forms): Jenny JS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 03/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor None Other:	Areas sealed off in attic - under floor boards
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) (Second) Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months (more than 6 months)	3/2003 Removal completed 12/2003 Recieved HEPA Vac
How often do you vacuum with your EPA provided HEPA vacuum?	(Once a week) More than once a week Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal Electric Propane/Gas Other: Fuel Oil	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	VFW - Libby Christian Church Shop - Behind Church = Volunteer Work	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION Associated with samples CE-00028, CE-00024, and CE-00025

Sheet No.: SA-000135

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 27-28 Sampling Date: ~~1/8/04~~ 1/8/03 1/8/04

Address: 620 Utah Ave Owner/Tenant: Roland Childs

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (JP 1/8/04)	Cassette 2 (JP 1/8/04)	Cassette 3
Index ID	CE- 00024	CE- 00025	
Location ID	BD-002177	BD-002177	
Sample Group	House	House	
Location Description	Living Room	West Bedroom 2nd level	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	0689	0387	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/8/04	1/8/04	
Start Time	0832 / 1144	0834	
Start Flow (L/min)	9.01 / 9.01	9.01	
Stop Date	1/8/~~05~~ 04	1/8/04	
Stop Time	1143 / 1945	1948	
Stop Flow (L/min)	4.21 / 9.01	9.01	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			JP 1/8/04
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team)			
Entered (LFO) JP	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by JP	QC by JL

vs 101503

Sheet No.: D- 000070

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100301 Page No: 17-28 Sampling Date: 1/8/04

Address: ~~3796 Hwy 2~~ 1/8/04 Owner/Tenant: Roland Childs

Business Name: ~~620 Utah Utah Ave.~~ N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00028		
Location ID	BD-002177		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), (Second Level) Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA (1/8/04)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	666023		
Flow Meter ID No.	B1610 / S1521		
Start Time	1539 / 1543 / 1549	1552	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1541 / 1545 / 1551	1554	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 - Ground floor Hallway 100 cm^2 - Ground floor ~~top of~~ window sill in living room 100 cm^2 - 2nd level in hallway	100 cm^2 2nd level - top of dresser in S. Bedroom 100 cm^2 100 cm^2	100 cm^2 1/8/04 100 cm^2 100 cm^2
Cassette Lot Number:	23802		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) ____	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by GP	QC by TC

vs 101503

Roland Childs

Location 620 Utah Ave Date 1/8/04

Project / Client PCE - EPA / Volpe

Author: Gregory Pacuna CDM

Activity: Stationary Air sampling will be completed on the ground floor and 2nd level. One dust sample will be collected. All sampling will be conducted inside of BS-000217 IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment: Ref pg 6 of this logbook. Rotometer 92045-1 used to calibrated air samples. 0800 Low vol. sampling pump 666023 calibrated with Dry Cal B-1610 51521.

0815 Onsite. Sample locations selected and pumps turned on. CE-00024 pre-calibrated.

0832 CE-00024 started. CE-00025 pre-calibrated

0834 CE-00025 started. Offsite to 3796 Hwy 25.

1135 Onsite. DIF completed with residents. CE-00024, 25 Flow Ck.

CDM

28 Roland Childs

Location 620 Utah Ave. Date 1/8/04

Project / Client PCE-EPA/Volpe

Author: [redacted] Gregory Parana

1143 CE-00024 stopped. Re-calibrated.
1144 CE-00024 started. CE-00025 flow check. No change. Offsite.
1530 Onsite. Flow ck - OK. Filter Ck. OK. (A)
1554 CE-00028 (Dust) collected Offsite. (B)
1940 Onsite. (C)
1945 CE-00024 stopped post calibrated and sealed. (D)
1948 CE-00025 stopped, post calibrated and sealed. (E)
Equipment decontaminated at site. Offsite to 3796 Hwy 2 S.
2030 Onsite CDM Office. Samples locked IN sample storage Ref FSIDS SA-000185 D-000070.

1212 Louisiana Ave

BD# 000315

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100301 Page No.: 29-30 Site Visit Date: 1/12/04

Address: 1212 Louisiana Ave Structure Description: House

Occupant: Joe Duffield Phone Number: 406-293-6685

Owner (if different than occupant): N/A Phone Number: N/A

Business Name: N/A

Sampling Team: PARANA-CDM

Field Form Check Completed by (100% of forms): YP ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 03/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) (Second) (Garage) Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile (Yard) None Other:	Along house and along fence
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile (Yard) None Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months (more than 6 months)	
How often do you vacuum with your EPA provided HEPA vacuum?	(Once a week) More than once a week Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal (Electric) Propane/Gas Other:_____	
Heat Distribution	Forced air (Radiant) Other:_____	Wall board
How soon after the removal was a forced air heating source first used?	~~Immediately 1 to 2 months~~ 10/12/04 3 to 4 months ~~5 to 6 months~~ more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Retired	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA-000208

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 29-30 Sampling Date: 1/12/04

Address: 1212 Louisiana Ave Owner/Tenant: Duffield

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (JP 1/12/04)	Cassette 2 (JP 1/12/04)	Cassette 3
Index ID	CE- 00032	CE- 00033	
Location ID	BD-000315	BD-000315	
Sample Group	House	House	
Location Description	Kitchen	2nd level Hallway	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	0891	0387	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/12/04	1/12/04	
Start Time	0816	0849	
Start Flow (L/min)	9.01	9.01	
Stop Date	1/12/04	1/12/04	
Stop Time	2005	2008	
Stop Flow (L/min)	9.40	9.01	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			JP 1/12/04
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ____ Entered (LFO) ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by_	QC by

vs 101503

Sheet No.: D- 000099

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100301 Page No: 29-30 Sampling Date: 1/12/04

Address: 1212 Louisiana Ave. Owner/Tenant: Duffield

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
	1/12/04		
Index ID	CE- 00035		
Location ID	BD-000315		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), (Second Level) Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	612058		
Flow Meter ID No.	B1610-51521		
Start Time	1713 / 1716 / 1720	1723	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1715 / 1718 / 1722	1725	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 Kitchen floor 100 cm^2 Living Room window sill 100 cm^2 2nd level hallway	100 cm^2 2nd level North Bedroom top of dresser 100 cm^2 100 cm^2	100 cm^2 100 cm^2 100 cm^2
Cassette Lot Number: 23802	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

1/12/04

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Duffield

29

Location 1212 Louisiana Ave. Date 1/12/04

Project / Client PCE: EPA: Volpe

Author: Gregory Parana

Activity: Stationary Air and dust samples will be completed as part of the PCE Samples will be conducted IAW SAP Addendum, PCE, OS Sampling 12/1/03. Equipment: Ref PJ 6 of this logbook. 92045-1 rotometer used to calibrate air samples.

0835 Onsite. CE-00032 pre-calibrate

0846 CE-00032 started.

CE-00033 pre-calibrated.

0849 CE-00033 started.

Offsite.

1130 Onsite. PIF completed with Mr Duffield.
CE-00032, 33 filter Ck-Ok.
Flow Ck-OK. 1155 Offsite

1500 Onsite. Flow Ck-Ok.
Filter Ck-Ok. Offsite

1705 Onsite. Pump 612058 calibrated with drycal BIGIO S1521 @ (1) M Office.

1725 CE-00035 collected.

1/12/04

30 Duffield

Location 1212 Louisiana Ave Date 6/12/04

Project / Client PCE-ERA/Volpe — COM

Author: Gregory Perna

2005 CE-00032 stopped, post calibrated and sealed.

2008 CE-00033 stopped, post calibrated and sealed. Equipment decontaminated Offsite. Ref FSDS 0-000099, SA-000208 REF. BD-000315. Samples locked in sample storage @ COM office.

2040 Out of log book.

GPerna

154 Ski Rd

Sheet No.: SA-000213

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 31-32 Sampling Date: 1/13/04

Address: 154 Ski Rd Owner/Tenant: Beaulieu

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (1/13/04)	Cassette 2 (1/13/04)	Cassette 3 (1/13/04)
Index ID	CE- 00036	CE- 00037	CE- 00038
Location ID	BD-003192	BD-003192	BD-003192
Sample Group	House	House	House
Location Description	2nd level West Bedroom	Ground level Living Room	Center of Basement
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	(Indoor) Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	(25mm) 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	(Rotometer) DryCal NA
Pump ID Number	0387	1009	05913
Flow Meter ID No.	92045-1	92045-1	92045-1
Start Date	1/13/04	1/13/04	1/13/04
Start Time	0830	0833	0835
Start Flow (L/min)	9.01	9.01	9.01
Stop Date	1/13/04	1/13/04	1/13/04
Stop Time	1940	1945	1949
Stop Flow (L/min)	9.01	9.21	9.21
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	(No) Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	(No) Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)
Field Comments			
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ____ Entered (LFO) JB	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000101

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Logbook No: 100301 Page No: 31-32 Sampling Date: 1/13/04

Address: 154 Ski Rd. Owner/Tenant: Beaulieu

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00062		
Location ID	BP-003192		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), (Second Level) Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 (300) 400 NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	612058		
Flow Meter ID No.	B1610-51521	1/13/04	
Start Time	1440 / 1443 / 1447	1450 / 1454 / 1458	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0 / 2.0	
Stop Time	1442 / 1445 / 1449	1452 / 1456 / 1500	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0 / 2.0	
Pump Fault? (circle)	(No) Yes	(No) Yes	No Yes
Field Comments	100 cm^2 2nd level on floor 100 cm^2 2nd level top of computer stand 100 cm^2 Ground level on floor in living room	100 cm^2 Ground level in laundry Rm top of shelf 100 cm^2 - Basement on floor 100 cm^2 - Basement top of dresser	100 cm^2 100 cm^2 100 cm^2
Cassette Lot Number:	23802		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) CLD	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

154 Ski Rd - Beaulieu

Location

Date 1/13/04

Project / Client PCE - EPA - Volpe

Author: Gregory Parana

Activity: Stationary Air and Dust samples will be collected as part of the post cleanup evaluation. Sampling will be conducted in level D PE IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment: Refer to page 6 of this logbook. Rotometer 92045-1 used to calibrate samplers onsite. Dry-cal BI610/S1521 used to calibrate low volume sampling pump 612058 @ 0 Office prior to dust sampling. 0820 Onsite. CE-00036 pre-calibrated.

0830 CE-00036 (2nd level) started.

1/13/04 CE-00037 pre-calibrated.

0833 CE-00037 (Living Room) started.

CE-00038 pre-calibrated.

0835 CE-00038 (Basement) started.

Offsite.

1155 Onsite. Flow Ck-OK, Filter Ck-OK. RFF # BD-005192 completed with resident.

1210 Offsite.

1/13/04

154 Ski Bd.

32

Location: Beaulac Date: 1/13/04

Project/Client: PCE-EPA/Volpe

Author: Gregory Paruna CDM

1435 Onsite. Flow Ck-Ok Filter Ck-Ok

1500 CE-00062 collected and sealed. Equipment decontaminated. Offsite.

1740 Onsite. Flow Ck-Ok Filter Ck-Ok.

1935 Onsite.

1940 CE-00036 stopped, post calibrated and sealed.

1945 CE-00037 stopped, post calibrated and sealed.

1949 CE-00038 stopped, post calibrated and sealed. Equipment decontaminated. Offsite to 505 Louisiana. Onsite CDM Office. Samples placed in sample storage.

2030 Out of logbook.

1/13/03

2297 Kootenai River Rd

BD# 000790

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100301 Page No.: 33-34 Site Visit Date: 1/19/04

Address: 2297 Kootenai River Rd. Structure Description: House

Occupant: Mitch & Lisa Powers Phone Number: 293-9294

Owner (if different than occupant): Mike Powers Phone Number: 293-6771

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): JP

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 10/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	(Attic) (Walls (interior or exterior)) Crawl Space Basement Sub-floor None Other:	Above Bathroom
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	(Driveway) Flowerbed Garden Stockpile (Yard) None Other:	Garage Adjacent House
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard None Other: Unknown	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months (5 to 6 months) more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week (More than once a week) Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal Electric Propane/Gas Other: Fuel Oil	
Heat Distribution	(Forced air) Radiant – Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	2293 Kootenai River Rd	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Naturally Good Things Barn on Power's Property	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: PA- 000631

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Field Logbook No: 100301 Page No: 37-38 Sampling Date: 1/21/04

Address: 2297 Kootenai River Rd. Owner/Tenant: Mitch & Lisa Powers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Person Sampled: Mitch & Lisa Powers SNN: N/A Task: Post Clean Up Evaluation

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE-00077	CE-00077	
Location ID	BD-000790	BD-000790	
Sample Group	House	House	
Location Description	Shoulder	Shoulder	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor	(Indoor) Outdoor	Indoor Outdoor
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	CC6348	626676	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/21/04	1/21/04	
Start Time	0850	1827	
Start Flow (L/min)	2.77	2.77	
Stop Date	1/21/04	1/21/04	
Stop Time	~~1347~~ 1337	1854	
Stop Flow (L/min)	2.77	2.77	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	TWA EXC (NA)	TWA EXC (NA)	TWA EXC NA
Field Comments	Resident stopped pump with 287 min.	Resident started pump. 27 minutes on counter	1/21/04
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team)			
Entered (LFO)			
	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by:	QC by:

vs 101503

Sheet No.: SA- 000167

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 33-34 Sampling Date: 1/19/04

Address: 2297 Kootenia River Rd Owner/Tenant: Mitch & Lisa Powers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00078		
Location ID	BD-000790		
Sample Group	House		
Location Description	Living Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2141		
Flow Meter ID No.	92045-1		
Start Date	1/19/04		
Start Time	0810		
Start Flow (L/min)	4.09		
Stop Date	1/19/04		
Stop Time	1920		
Stop Flow (L/min)	4.29		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	670 min x 4.19 L/min = 2807		1/19/04
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team)	Volpe:	Volpe:	Volpe:
Entered (LFO)	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000107

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100301 Page No: 33 34 Sampling Date: 1/19/04

Address: 2297 Kootenai River Rd. Owner/Tenant: Mitch & Lisa Powers

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00081		
Location ID	BP-000790		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	626666		
Flow Meter ID No.	B1610 - S1521		
Start Time	1513 / 1516 / 1519	1523	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1515 / 1518 / 1521	1525	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 - Kitchen Floor 100 cm^2 - Kitchen top of Refrigerator 100 cm^2 - Living Room Floor	100 cm^2 - Living Room top of fireplace mantel 100 cm^2 100 cm^2	100 cm^2 100 cm^2 100 cm^2
Cassette Lot Number:	23802		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

1/19/04

1/19/04

1/19/04

For Field Team Completion (Provide Initials)	Completed by GP	QC by TL

vs 101503

BD# 000790

Residential Activity Log

Resident Address: 2297 Kootenai River Rd.

Volunteer Name: Mitch & Lisa Powers

Sampling Date(s): 1/20/04

Personal air sample number (s): CE-00077

FSDS number(s): PA-000033, SA-000187

Date/Time Interval	Go Outside?	Pump problem?	General Activities
Lisa 1/20/04 9-10	(No) Yes (___ mins) Describe	(No) Yes (describe)	Computer
Mitch 10-12:15	(No) Yes (___ mins) Describe	No Yes (describe)	Computer
Lisa 12:15 5:00	(No) Yes (___ mins) Describe	No Yes (describe)	playing dishes watch TV
mitch 5:00	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	

$66298

Note: Continue on second page if necessary.

293-1374

BD# 000790

Residential Activity Log

Resident Address: 2297 Kootenai River Rd

Volunteer Name: Lisa & Mitch Bowers

Sampling Date(s): 1/21/04

Personal air sample number (s): CE-00077

FSDS number(s): PA-000031 , SA-000209

Date/Time Interval	Go Outside?	Pump problem?	General Activities
Lisa 8:50 1/21 1:50	(No) Yes (___ mins) Describe	(No) Yes (describe)	dishes laundry computer
Lisa 3:45 5:10	(No) Yes (___ mins) Describe	(No) Yes (describe)	tv laundry
Mitch 5:35	(No) Yes (___ mins) Describe	No Yes (describe)	Cook
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

Greg 293-1374

BD# 000790

Residential Activity Log

Resident Address: 2297 Kootenai River Rd.

Volunteer Name: Mitch & Lisa Powers

Sampling Date(s): 1/19/04

Personal air sample number (s): ~~CE-00078~~ 1/19/04 CE-00077

FSDS number(s): SA-000167, PA-000032, D-000107

	Date/Time Interval	Go Outside?	Pump problem?	General Activities
Mitch	1/19/04 8:30 - 10:15	(No) Yes (___ mins) Describe	(No) Yes (describe)	slept on couch
Lisa	1/19/04 10:15 12:05	No Yes (___ mins) Describe trying to put diaper outside for a second	(No) Yes (describe)	ran vacuum laundry computer
Mitch	12:05 3:30	No Yes (___ mins) Describe 10 seconds to get CO out of car at 12:25	(No) Yes (describe)	tv computer
Lisa	3:30 6 30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Computer Make supper machine quit on me
		No Yes (___ mins) Describe	No Yes (describe)	
		No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

Greg 293-1374

2297 Kootenia River Rd. - Mitch Powers

Location PCE Date 1/19/04

Project / Client Volpe - EPA

Author: Gregory Parana / Gregory Para CDM

Activity: Stationary Air, Personal Air and dust samples will be collected as day 1 of 3 for the PCE. Sampling will be conducted in Level D PPE IAW SAP Addendum, CSS, PCE Sampling 12/1/04. Rotometer 42045-1 used to calibrate samples Dry Cal B1610 - S1521 used to calibrate LV pump for dust sampling.

Onsite 0900. CE-00077, 78 pre-calibrated.
0808 CE-00077 started on Mitch Powers.
0810 CE-00078 started (living Rm).
1130 Onsite. Flow Ck OK Filter Ck-OK.
CE-00077 on Lisa Powers.
Volunteers completing Residential Activity Log. Offsite to 118 Cal.
1455 Onsite.
1458 CE-00077 stopped, post calibrated. CE-00077 placed on pump and calibrated.
1459 CE-00077 started. 1/19/04

34

2297 Kootenai River Rd

Location Powers Date 11/19/04

Project / Client PCE - EPA - Volpe

Author: Gregory Parana CDM

CE-00078 Flow Ck - OK Filter - Ok.
1525 CE-00081 (Dust) collected.
REF BD-000790 completed
1850 ~~1830~~ 11/19/04 with Mitch & Lisa Powers.
~~1830~~ Recieved call from Lisa Power - Pump stopped. (10)
1910 Onsite. CE-00077 stopped, battery was dead. 221 min noted on counter. CE-00077 post-calibrated.
1920 CE-00078 stopped, post-calibrated. Both samples sealed. ~~and stopped~~ 11/19/04 Equipment decontaminated. Residential Activity log recieved from tenants. Ref FSDS SA-000167, PA-000032. Offsite. (4)
1935 Onsite CDM office. Samples placed in sample storage.
1950 Out of logbook.

11/19/04

35

2297 Kootenai River Rd.

Location Powers: Mitch & Lisa Date 11/20/04

Project / Client PCE - EPA / Volpe

Author: Gregory Parana CDM

Activity: Day 2 of 3. Stationary Air and personal air samples will continue to be collected on Mitch & Lisa Powers. Ref. pg 33. 0850 Onsite. CE-00077 pre-calibrated on pump 666348.
0855 CE-00077 placed on Lisa Powers and started. Residential Activity Log given to Lisa to complete. CE-00078 pre-calibrated.
0900 CE-00078 started. Offsite.
1255 Onsite. (5)
CE-00078 Flow Ck-Ok, Filter Ok.
1310 CE-00077 stopped. Post Cal.
CE-00077 placed on pump 666248 and calibrated.
1313 CE-00077 started (placed on Lisa).
1702 Onsite Flow Ck-Ok Filter Ck-Ok. (4)
2020 Onsite. (3)
2022 CE-00077 stopped and post calibrated. (6)
2025 CE-00078 stopped and post calibrated.

11/20/04

2297 Kootenai River Rd

Location Mitch + Lisa Powers Date 1/20/04

Project / Client PCE - EPA / Volpe

Author: Gregory Parana CDM

Equipment decontaminated. Offsite

2055 Onsite CDM office. Sampled locked in sample storage.
Ref FSDS SA-000187, PA-000033
REF/Residential Activity Log BP-000790.

2130 Out of logbook.

1/20/04

2297 Kootenai River Rd.

Location Mitch + Lisa Powers Date 1/21/04

Project / Client PCE EPA / Volpe

Author: Gregory Parana CDM

Activity: Day 3 of 3 collecting PCE samples, Ref Pg 33 for details of sampling.

0847 - Onsite. CE-00077 placed on ~~Lisa P~~ pump 1/21/04 pump 666348 and pre-calibrated.

0850 CE-00077 placed on Lisa and started. RAL given to resident to complete. CE-00078 placed of HV pump 2141 and pre-calibrated.

0856 CE-00078 started.

1120 Onsite. CE-00077 flow Ck, Filter Ck - Ok.

1125 CE-00078 stopped. Flow rate adjusted.

1127 CE-00078 started.
Lisa Powers said they were leaving. She would stop pump and start pump when she returns.

1435 Onsite. Resident not present. 287 minutes on LV pump 666348.

1/21/04

2297 Kootenai River Rd - Mitch Powers

Date 1/21/04

Project/Client PCE - EPA/Volpe

Author: Gregory Farana CDM.

CE-00077 post calibrated. CE-00077 placed on pump 626676 and calibrated. Pump placed on hold.
CE-00078 Flow Ck - OK Filter Ck - OK.
1700 Onsite - Resident not home.
1850 Onsite. (B)
1854 CE-00077 stopped. 27 minutes on counter. Lisa Powers indicated that they just came home.
1857 CE-00078 stopped. Samples post calibrated and sealed. Equipment decontaminated.
1900 Offsite to CDM office.
1915 Samples placed in sample storage, Ref FSDS PA-000031, SA-000209 RAL BA # 000790. (C)
1925 Out of logbook. To 113 W O.k.

1/21/04

1417 Washington Ave

BD# 002504

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100301 Page No.: 39 Site Visit Date: 1/26/04

Address: 1417 Washington Ave. Structure Description: House

Occupant: Tess Jordan Phone Number: 293-7911 (Henry's)

Owner (if different than occupant): Judith Jordan - Deceased Phone Number:

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): HP JS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 10/03
Location of vermiculite removed indoors	(Attic) (Walls (interior or exterior)) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) (Crawl Space) Basement Sub-floor None Other:	2nd level
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) (Second) Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile (Yard) None Other:	Entire yard area
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes (No) If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Provided but not used
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other:_____	Never
Heating Source	(Wood) Coal (Electric) Propane/Gas Other:_____	
Heat Distribution –	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Henry's Restaurant	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION Government's contractor sprayed "shock" crete in crawl space. Vermiculite containing soil covered.

Sheet No.: SA- 000175

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 39 Sampling Date: 1/26/04

Address: 1417 Washington Owner/Tenant: Tess Jordan

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (JP 1/26/04)	Cassette 2 (JP 1/26/04)	Cassette 3 (JP 1/26/04)
Index ID	CE- 00101	CE- 00102	CE- 00106
Location ID	BD-002504	BD-002504	BD-002504
Sample Group	House	House	Blank
Location Description	Kitchen	2nd level	N/A
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS (FB-(field blank)) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	(Indoor) Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	(25mm) 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal (NA)
Pump ID Number	05910	0891-A	N/A
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/26/04	1/26/04	
Start Time	0824	0822	
Start Flow (L/min)	9.03	9.03	
Stop Date	1/26/04	1/26/04	JP 1/26/04
Stop Time	1947	1945	
Stop Flow (L/min)	8.82	9.03	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes (NA)
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes (NA)
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)
Field Comments / Cassette Lot Number: 310201 / 82415p	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	TC 1/26/04 Archive Blank (circle): (Yes) No
QC (Field Team) ____ Entered (LFO) JB	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by:	QC by

vs 101503

Sheet No.: D- 000117

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100301 Page No: 39 Sampling Date: 1/26/04

Address: 1417 Washington Ave. Owner/Tenant: Tess Jordan

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	JP 1/26/04 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00103		
Location ID	BA-002504		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), (Second Level) Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 (300) 400 NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	502077	JP 1/26/04	
Flow Meter ID No.	B1610, 51521		
Start Time	1149 / 1153 / 1156	1200	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1151 / 1155 / 1158	1202	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 - Living Room Floor - Ground level. 100 cm^2 - Ground level Kitchen - Top of Refrigerator. 100 cm^2 - 2nd level floor	100 cm^2 - 2nd level / top of hot water heater 100 cm^2 100 cm^2	100 cm^2 100 cm^2 JP 1/26/04 100 cm^2
Cassette Lot Number:	23802		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) JP	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

1417 Washington

Location Tess Jordan Date 1/26/04

Project/Client PCE-EPA/Volpe

Author: Gregory Paruna CDM

Activity: Stationary Air and Dust samples will be collected as part of the PCE-Sampling will be conducted in level D PPE IAW SAP Addendum CSS PCE Sampling 1/12/03. Equipment Ref Pg 6.

0818 Onsite. CE-00102 pre-calibrated.

0822 CE-00102 started (2nd level.)
CE-00101 pre-calibrated.

0824 CE-00101 started.

1135 Onsite. CE-00106-Blank-Exposed and sealed.

1202 CE-00103 ~~(Stanley)~~ to 1/26/04 Dust sample collected-sealed.

~~1/26/04~~ 1405 Onsite. PIF completed with Resident. 1405 Onsite. Flow Ck-Filter Ck: OK.

1640 Onsite. Flow Ck-Filter Ck-OK

1945 CE-00102 stopped.

1947 CE-00101 stopped. Samples sealed. Equipment disconnected.

2010 Onsite CDM offices. Samples placed in sample Storage. Ref SDSA-000175 D-000117. 2035 Out of log book.

1/26/04

233 W. Larch

BD# 000348

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 106301 Page No.: 40-41 Site Visit Date: 1/27/04

Address: 233 W. Larch St. Structure Description: House

Occupant: Regina Couture Phone Number: 293-6695

Owner (if different than occupant): Peterson Phone Number: N/A

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): JP JB

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		Date Removal Completed: 02/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic (Walls (interior or exterior)) Crawl Space Basement Sub-floor None Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes (No) *If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin:* Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Just pick it up 1/26 @ info center
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other:_____	N/A
Heating Source	Wood/Coal Electric Propane/Gas Other: Fuel 0.1	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Unknown
Have any of the occupants been in contact with any vermiculite since the removal was completed?	(Yes) No Unknown	Explain: ~~Floor of 1/27/04~~ Ground level walls during receptical replacement
Addresses of other homes or properties where the occupants visit and may contain vermiculite	93 St. Regis Rd. Troy MT	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Pizza Hut Payne Machinery	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA-000178

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100301 Page No: 40-41 Sampling Date: jp 1/27/04 1/28/04 1/27/04

Address: 233 W Larch St. Owner/Tenant: Regina Couture → Peterson, Terry & Carolyn

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (jp 1/27/04)	Cassette 2 (jp 1/27/04)	Cassette 3 (jp 1/27/04)
Index ID	CE- 00107	CE- 00108	CE- 00109
Location ID	BD-000348	BD-000348	BD-000348
Sample Group	Basement	House	House
Location Description	Basement	Ground level Kitchen	2nd level Hallway
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	(Indoor) Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	(25mm) 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	(Rotometer) DryCal NA
Pump ID Number	05910	05913	0891-A
Flow Meter ID No.	92045-1	92045-1	92045-1
Start Date	1/27/04	1/27/04	1/27/04
Start Time	820	0823	0826
Start Flow (L/min)	9.03	9.03	9.03
Stop Date	1/27/04	1/27/04	1/27/04
Stop Time (jp 1/27/04)	~~0742~~ 1942	1945	1949
Stop Flow (L/min)	9.03	9.03	9.03
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	(No) Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	(No) Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)
Field Comments			jp 1/27/04
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
(Field Team) Entered (LFO)	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Couture - Tenant

Location 233 W. Larch St. Date 1/27/04

Project / Client PCE - EPA / Volpe

Author: Gregory Parena COM Gregory Parena

Activity: Stationary Air and Dust Samples will be collected in the house: BD-000348. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment: Ref. pg 6 of this logbook. Rotometer 92045-1 will be used to calibrate samples. Pump (LV) 502077 calibrated with Dry Cal B1610-S1521 @ 0800.

0810 Onsite. CE-00107 pre-calibrated.

0820 CE-00107 (Basement) started.
CE-00108 pre-calibrated.

0823 CE-00108 (Kitchen) started.
CE-00109 pre-calibrated.

0825 CE-00109 (2nd level) started.
Offsite. (1)

1130 Onsite - Flow Ck, Filter Clc - Ok.

1200 CE-00110 (dust) collected.
~~1514~~ 1/27/04. PCE BD-000348 completed with resident. (2)

1510 Onsite. Flow Ck - Filter Clc - Ok.

1127/04

Couture - Tenant

Location 233 W. Larch St. Date 1/27/04

Project / Client PCE - EPA / Volpe

Author: Gregory Parena COM

1942 CE-00107 stopped post calibrated and sealed.

1945 CE-00108 stopped post calibrated and sealed.

1949 CE-00109 stopped, post calibrated and sealed. Equipment decontaminated and removed from site. SA-000176, D-000119.

2010 Samples locked in CDM office.

2030 Out of logbook.

38 Spencer Hill Way

BD# 002380

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

1/28/04

Field Logbook No.: 00301 Page No.: 42-43 Site Visit Date: 1-28-04

Address: 38 Spencer Hill Way Structure Description: House

Occupant: Leonard and Ruth Rice Phone Number: 293-4518

Owner (if different than occupant): N/A Phone Number: N/A

Business Name: N/A

Sampling Team: PARANA, COM

Field Form Check Completed by (100% of forms): JP ps

5/12/04

Data Item	Value	Notes 9/03 JP
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed: 08/03**
Location of vermiculite removed indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor Other: None	Removed vermiculite soil from inside of wood shed. Garage was also cleaned
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway (Flowerbed) (Garden) Stockpile (Yard) None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months (5 to 6 months) more than 6 months	Received HEPA vac on 1/16/04.
How often do you vacuum with your EPA provided HEPA vacuum?	(Once a week) More than once a week Twice a month Once a month Less than once a month Other:_____	
Heating Source	(Wood/Coal) Electric Propane/Gas Other: Fuel Oil	
Heat Distribution	(Forced air) (Radiant) Other:_____	Wood - Radiant Fuel Oil -
How soon after the removal was a forced air heating source first used?	Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	2 months
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	6693 Farm to Market Rd	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Retired	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: PA- 000024

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Field Logbook No: 100301 Page No: 42-43 Sampling Date: 1/28/04

Address: 38 Spencer Hill Ave. Way JB 2/2/04 Owner/Tenant: Rice

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Person Sampled: N/A SNN: N/A Task: Post Clean Up Evaluations

JB 1/28/04

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00111		
Location ID	BA-002380		
Sample Group	House		
Location Description	Shoulder		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor	Indoor Outdoor	Indoor Outdoor
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA JB 1/28/04	Rotometer DryCal NA
Pump ID Number	612058	626676	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/28/04	1/28/04	
Start Time	0835	1256	
Start Flow (L/min)	2.77	2.77	
Stop Date	1/28/04	1/28/04	
Stop Time	1238	1800	
Stop Flow (L/min)	2.77	2.77	
Pump fault? (circle)	No (Yes) NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	TWA EXC (NA)	TWA EXC (NA)	TWA EXC NA
Field Comments	243 on counter 243 min x 2.77 L/min = 673 L	JB 1/28/04 664 min x 2.77 L/min 304 = 842 L	JB 1/28/04
Cassette Lot Number:	310201		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JB	Volpe:	Volpe:	Volpe:
Entered (LFO) JB	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000136

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100301 Page No: 45 Sampling Date: 1/30/04

Address: 38 Spencer Hill Way Owner/Tenant: Rice

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (1/30/04)	Cassette 2 (1/30/04)	Cassette 3
Index ID	CE- 00116	CE- 00117	CE-00116
Location ID	BD-002380	BD-002380	BD-002380
Sample Group (circle) (Subgroup of the property)	Garage, (House) Shed, Pump House Other_____	Garage, House, Shed, Pump House Other 1/30/04 Blank	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), Second Level Other_____	Basement, Ground Floor, Second Level Other N/A	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other N/A	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS (FB-(field blank)) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 (NA)	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal (NA)	Rotometer Dry-Cal NA
Pump ID No.	626666	N/A	
Flow Meter ID No.	B1610-51521		
Start Time	1145 / 1149 / 1154		1157
Start Flow (L/min)	2.0 / 2.0 / 2.0		2.0
Stop Time	1147 / 1151 / 1156		1159
Stop Flow (L/min)	2.0 / 2.0 / 2.0	1/30/04	2.0
Pump Fault? (circle)	(No) Yes	No Yes 1/30/04	No Yes
Field Comments Cassette Lot Number: 23802	100 cm^2 - Living Room floor 100 cm^2 - Laundry Room floor 100 cm^2 - Kitchen window sill	100 cm^2 100 cm^2 100 cm^2	100 cm^2 - NW Computer room top of desk 100 cm^2 100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) JB	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

42

Rice

Location: 38 Spencer Hill Way Date: 1/28/04

Project/Client: PCE - EPA/Volpe

Author: Gregory Pacana GP CDM

Activity: Day 1 of 3. Stationary Air and Personal Air samples will be collected over a 3 day period. Dust sample will be collected. All samples will be collected in BD-002380. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment - Reference page 6 of this logbook.

0815 Onsite. CE-00111 pre-calibrated.

0835 CE-00111 placed on Leonard Rice. The Rice's will switch the pump - sample between each other over the 3 day period. CE-00112 (SA) pre-calibrated.

0840 CE-00112 started. Offsite.

0850 1108 Louisiana Ave. No answer @ Door. Called and left message on answering machine.

1110 Onsite 38 Spencer Hill way. PIF BD-002380 completed with Leonard and Ruth Rice

GP 1/28/04

Residential Activity log BD 002380 GP 1/28/04

Ref FSDS PA-000024, SA-000177

Rice

Location: 38 Spencer Hill Way Date: 1/28/04

Project/Client: PCE - EPA/Volpe

Author: Gregory Pacana GP CDM

CE-00111 Flow Ck - Ok. Filter Ok.

CE-00112 Flow Ck - Filter Ck - OK.

1240 Contacted by Leonard Rice. Stated that pump stopped.

1250 Onsite. LV pump 612058 Low Battery fault. Post-Calibrated sample CE-00111. Place CE-00111 on LV pump 626676 and calibrated.

1256 CE-00111 started on RR. CE-00112 Flow; Filter Ck - Ok.

1608 Onsite. CE-00111, 112 Flow and Filter Ck - Ok. Rice's leaving @ 1830. Request sample stopped @ 1800.

1754 Onsite.

1756 CE-00112 stopped. Post Calibrated and sealed.

1800 CE-00111 stopped. Post calibrated and sealed. Samples placed in sample storage CDM office. 1835 Out of logbook.

GP 1/28/04

Location 38 Spencer Hill Way (Rice) Date 1/29/04

Project / Client PCE - EPA / Volpe

Author: Gregory Purana CDM

Activity: Day 2 of 3 of the PCE. Ref. pg 42. Equipment Ref Pg 6.

0810 Onsite. CE-00111 on pump G26676 and calibrated.

0820 CE-00111 started. LR

CE-00112 pre-calibrated.

0824 CE-00112 started.

Residential Activity log given to resident.

1120 Onsite. Resident did not answer door. Offsite to 1202 ~~Lunch~~ Idaho.

1440 Onsite. RR wearing sample pump.

1450 CE-00111 stopped. Post Calibrated.

CE-00111 placed on LV Pump 666248 and calibrated.

1453 CE-00111 started. Sample RR.

Filter - OK.

CE-00112 Filter 10% loaded. Flow-OK.

1510 Offsite to 1202 Idaho Ave.

1945 Onsite CE-00111 stopped, Post calc.

1947 CE-00112 stopped - Post Calibrated.

Equipment deconned.

2010 C CDM office. Samples locked.

Ref FSDS SA-000178, PA-000051

Location 38 Spencer Hill Way (Rice) Date 1/30/04

Project / Client PCE - EPA / Volpe

Author: Gregory Purana CDM

Activity: Day 3 of 3 of the PCE. Ref. Pg 42. 0725 LV 626666 calibrated with Dry Cal BIO10-S1521.

0810 Onsite. CE-000111 calibrated ON LV 626676.

0815 CE-000111 started, placed on LR.

CE-000112 calibrated on HV 2141.

0820 CE-000112 started. Offsite to Help SO.

1125 Onsite Flow Ck Filter Ck - Ok

1414 Onsite - Flow - Filter Ck - Ok

1605 Onsite.

1607 CE-000111 stopped calibrated.

1610 CE-000111 started on pump 666248.

Late Entry 1159 CE-00116 (dust) collected.

CE-00117 (Blank) exposed and sealed.

1933 Onsite.

1935 CE-000111 stopped.

1939 CE-000112 stopped. Samples post calibrated and sealed. Equipment deconned 1950 Onsite @ office.

Samples locked in sample storage Ref FSDS SA-000182, PA-000052, D-000136.

1/30/04

100304

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12/15-03 to 1/29/04

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- > Persons on team
- > Level of PPE
- > Title of governing document
- > Serial numbers of equipment

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603 W. 10th St

12/16/03

BD# BA-000490

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100304 Page No.: 3-5 Site Visit Date: 12/15/03

Address: 603 W. 10th St. Structure Description: ~~12/12/15~~ Anne Pescatore House

Occupant: Anne Pescatore Phone Number: 293-5839

Owner (if different than occupant): N/A Phone Number: N/A

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): JP JD

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 7/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space (Basement) Sub-floor Other:	Around Chimney in basement
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) (Ground) Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway (Flowerbed) Garden Stockpile (Yard) None Other:	Around trees
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months (more than 6 months)	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other:_____	Two time since she received the vacuum
Heating Source	(Wood/Coal) (Electric) Propane/Gas Other:_____	Wood in basement Electric on ground floor
Heat-Distribution	(Forced air) (Radiant) Other:_____	Baseboard wall mount Radiant in basement
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	No	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Retired	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: PA-000028

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Field Logbook No: 100304 Page No: 3-5 Sampling Date: 12/15/03

Address: 603 W. 10th St Owner/Tenant: Anne Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Parana

Person Sampled: Anne Pescatore SNN: 3426 Task: Post Clean Up Evaluation

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00010		
Location ID	BD-000490		
Sample Group	House		
Location Description	Shoulder		
Category (circle)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	Indoor Outdoor	Indoor Outdoor	Indoor Outdoor
Filter Diameter (circle)	25mm 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8 12/15/03	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	626514	666023	
Flow Meter ID No.	92045-1	92045-1	
Start Date	12/15/03	12/15/03	
Start Time	0831	1243	
Start Flow (L/min)	3.11	3.11	
Stop Date	12/5/03	12/5/03	
Stop Time	1213	1831	
Stop Flow (L/min)	3.11	2.91	
Pump fault? (circle)	No (Yes) NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	TWA EXC (NA)	TWA EXC (NA)	TWA EXC NA
Field Comments	222 on counter 222min x 3.11 l/min = 690 l	348min x 3.01 l/min = 1047 l	12/15/03
Cassette Lot Number:	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team)	Volpe:	Volpe:	Volpe:
Entered (LFO)	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA-~~000151~~

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 3-6 Sampling Date: 12/15/03

Address: 603 W. 10th St. Owner/Tenant: Annie Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00011		
Location ID	BD-000490		
Sample Group	House		
Location Description	Living Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2133		
Flow Meter ID No.	92045-1		
Start Date	12/15/03		
Start Time	0845		
Start Flow (L/min)	4.09		
Stop Date	12/15/03		
Stop Time	1835		
Stop Flow (L/min)	4.09		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	590 min x 4.09 L/min = 2413 L		12/16/03
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JR	Volpe:	Volpe:	Volpe:
Entered (LFO) JR	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA-000152

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100364 Page No: 3-5 Sampling Date: 12/15/03

Address: 603 W. 10th St. Owner/Tenant: Anne Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (12/15/03)	Cassette 2	Cassette 3
Index ID	CE- 00012		
Location ID	BD-000490		
Sample Group	House		
Location Description	Basement		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2135		
Flow Meter ID No.	92045-1		
Start Date	12/15/03		
Start Time	0849		
Start Flow (L/min)	4.09		
Stop Date	12/15/03		
Stop Time	1840		
Stop Flow (L/min)	4.09		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	591 min x 4.09 L/min = 2417 L		12/16/03
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) TC	Volpe:	Volpe:	Volpe:
Entered (LFO) LO	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: PA- 000037

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Field Logbook No: 100304 Page No: M-9 Sampling Date: 12/16/03

Address: 603 W. 10th St. Owner/Tenant: Anne Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANH

Person Sampled: Anne Pescatore SNN: _____ Task: Post Cleanup Evaluation

$12/16/03

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00017		
Location ID	BD-000490		
Sample Group	House		
Location Description	Shoulder		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor	Indoor Outdoor	Indoor Outdoor
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	666023	666348	
Flow Meter ID No.	92045-1	92045-1	
Start Date	12/16/03	12/16/03	
Start Time	0835 / 1141	1447	
Start Flow (L/min)	3.11 / 3.11	3.11	
Stop Date	12/16/03	12/16/03	
Stop Time	1140 / 1445	1904	
Stop Flow (L/min)	2.91 / 3.11	3.11	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	TWA EXC (NA)	TWA EXC (NA)	TWA EXC NA
Field Comments			
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) TZ Entered (LFO) JO	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000153

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 7-9 Sampling Date: 12/16/03

Address: 603 W. 10th St. Owner/Tenant: Anne Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	12/16/03 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00018		
Location ID	BP-000490		
Sample Group	House		
Location Description	Living Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2133		
Flow Meter ID No.	92045-1		
Start Date	12/16/03		
Start Time	0836		
Start Flow (L/min)	4.09		
Stop Date	12/16/03		
Stop Time	1906		
Stop Flow (L/min)	3.90		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) R	Volpe:	Volpe:	Volpe:
Entered (LFO) JO	Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000134

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 7-9 Sampling Date: 12/16/03

Address: 603 W. 10th St. Owner/Tenant: Anne Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00019		
Location ID	BP-000490		
Sample Group	House		
Location Description	Basement		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2135		
Flow Meter ID No.	92045-1		
Start Date	12/16/03		
Start Time	0940		
Start Flow (L/min)	4.09		
Stop Date	12/16/03		
Stop Time	1908		
Stop Flow (L/min)	4.09		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) JL Entered (LFO) LJO	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000085

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100304 Page No: 7-9 Sampling Date: 12/16/03

Address: 603 W. 10th St. Owner/Tenant: Anne Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00020		
Location ID	BD-00049 U		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	(Basement), (Ground Floor), Second Level Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	~~Horizontal Surfaces~~ (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 ~~NA~~ (400)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	~~B1610 S 1521~~ 612729 jb 1-15-04		
Flow Meter ID No.	~~612724~~ B1610S 1521 jb 1-15-04		
Start Time	1451 / 1454 / 1459	1503	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1453 ~~1455~~ / 1456 / 1501	1505	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2- Ground floor on floor @ front entrance	100 cm^2 Basement- top of hot water heater	100 cm^2
Cassette Lot Number: 236027	100 cm^2- Ground floor living room window sill	100 cm^2	100 cm^2
	100 cm^2- Basement on floor @ base of steps	100 cm^2	100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) jb	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: PA- 000038

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Field Logbook No: 100304 Page No: 10-12 Sampling Date: 12/17/03

Address: 603 W. 10th St. Owner/Tenant: Pescature

Business Name: NIA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Person Sampled: Anne Pescature SNN: NA Task: Post-Clean Up Evaluation

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00021		
Location ID	BD-000490		
Sample Group	House		
Location Description	Shoulder		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor	Indoor Outdoor	Indoor Outdoor
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm 12/17/03	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	666348	666248	
Flow Meter ID No.	92045-1	92045-1	
Start Date	12/17/03	12/17/03	
Start Time	0836	1451	
Start Flow (L/min)	3.11	3.11	
Stop Date	12/17/03	12/17/03	
Stop Time	1450	1850	
Stop Flow (L/min)	3.11	3.11	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	TWA EXC (NA)	TWA EXC (NA)	TWA EXC NA
Field Comments			12/17/03
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) _____ Entered (LFO) _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA-000165

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 10-12 Sampling Date: 12/17/03

Address: 603 W. 10th St. Owner/Tenant: Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00022		
Location ID	BD-000490		
Sample Group	House		
Location Description	Basement		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2135		
Flow Meter ID No.	92045-1		
Start Date	12/17/03		
Start Time	0843		
Start Flow (L/min)	4.09		
Stop Date	12/17/03		
Stop Time	1854		
Stop Flow (L/min)	4.09		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			12/17/03
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) _____ Entered (LFO) _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: SA- 000155

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 10-12 Sampling Date: 12/17/03

Address: 603 W. 10th St. Owner/Tenant: Pescatore

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	12/17/03 CE- 00023		
Location ID	30-000490		
Sample Group	House		
Location Description	Living Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	2133		
Flow Meter ID No.	92045-1		
Start Date	12/17/03		
Start Time	0845		
Start Flow (L/min)	4.09		
Stop Date	12/17/03		
Stop Time	1855		
Stop Flow (L/min)	4.09		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	12/17/03 Archive Blank (circle): Yes No
QC (Field Team) _____ Entered (LFO) _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

BD# 000490

Residential Activity Log

Resident Address: ~~607~~ 603 W. 10th St.

Volunteer Name: Anne Pescatore

Sampling Date(s): 12/15/03

Personal air sample number (s): CE-00010

FSDS number(s): PA-000028, SA-000151, SA-000152

Date/Time Interval	Go Outside?	Pump problem?	General Activities
8:30 – 11:30	(No) Yes (___ mins) Describe	(No) Yes (describe)	Housework
11:30-1:00 1:30-6:00	(No) Yes (___ mins) Describe	No (Yes) (describe) Pump fault	rested Varenna, chores, TV
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

Greg
293-1759

BD# 000490

Residential Activity Log

Resident Address: 603 W. 10th St.

Volunteer Name: Anne Pescatore

Sampling Date(s): 12/16/03

Personal air sample number (s): CE-00017

FSDS number(s): D-000085, PA-000037, SA-000153, 154, 155

Date/Time Interval	Go Outside?	Pump problem?	General Activities
9:00 – 11:00	No Yes (___ mins) Describe	No Yes (describe)	cleaned Kitchen, house work.
11:00 - 1:30	No Yes (___ mins) Describe	No Yes (describe)	laundry, etc.
1:30 – 2:30	No Yes (___ mins) Describe	No Yes (describe)	addressed X-mas cards
3:00 – 7:00	No Yes (___ mins) Describe	No Yes (describe)	rested TV
	No Yes (___ mins) Describe	No Yes (describe)	
	No Yes (___ mins) Describe	No Yes (describe)	

Note: Continue on second page if necessary.

Greg
293-1759

BD# 000490

Residential Activity Log

Resident Address: ~~12/17/03 Anne Pescatore~~ 603 W. 10th St

Volunteer Name: Anne Pescatore

Sampling Date(s): 12/17/03

Personal air sample number (s): CE-00021

FSDS number(s): PA-000038, SA-000155, 165

Date/Time Interval	Go Outside?	Pump problem?	General Activities
9:00 11:00	No Yes (___ mins) Describe	No Yes (describe)	House work
11:00 - 12:30	No Yes (___ mins) Describe	No Yes (describe)	Mac Cards Various
12:30 1:30	No Yes (___ mins) Describe	No Yes (describe)	rested - TV
1:30 - 2:30	No Yes (___ mins) Describe	No Yes (describe)	Various Chores Visitor
2:30 - 4:00	No Yes (___ mins) Describe	No Yes (describe)	Misc Chores TV
4:00 - 7:00	No Yes (___ mins) Describe	No Yes (describe)	TV

Note: Continue on second page if necessary.

Greg 293-1759

Pescatore 12/15/03 3

603 W. 10th St. - Post Evaluation Gregory Perrone

Weather: 24° F Clear

Activity: Personal, ~~am~~ pm 12/15/03 stationary and dust sampling will be conducted @ 603 W. 10th St. Sampling will be conducted IAW SAP Addendum, Post Clean-Up evaluation Sampling 12/1/03. (GP)

Equipment: 4 high volume sampling pumps, 4 low volume sampling pumps, 4 Cassette stands, Rotometer 92045-1, 0.8um PCM cassettes, 0.45u dust sampling cassettes, tyson, decon wipes, Dry Cal BL610/S 1521, screwdriver, flashlight, sample pump pouch. (GP)

0825 Onsite. (GP)

CE-00010 placed on pump G26514 and pre-calibrated. Sample placed on Anne Pescatore. (GP)

0831 CE-00010 started. (GP)

CE-00011 placed on pump 2133 and pre-calibrated (GP)

0845 CE-00011 (Living Room) started.

CE-00012 placed on pump 2135 and ~~started~~ pm 12/15/03 pre-calibrated.

12/15/03

Pescatore Post Clean-Up Evaluation
603 W. 10th St. 12/15/03

0849 CE-00012 (Basement) started.
1130 Onsite. CE-00010 Flow Ck - OK.
CE-00012, 11 Flow Ck. - OK.
1150 Offsite.
1230 Anne Pescatore contacted me and said here pump stopped.
1240 Onsite. CE-00010 stopped due to flow fault. Anticipated fault happened while volunteer napped. CE-00010 placed on pump 666023 and calibrated.
1243 CE-00010 started. 222 minutes on counter of pump 626514. This number will be used to calculate fault time/stop time. ~~1300~~
1250 Offsite.
1600 Onsite. CE-00010 flow Ck - OK.
CE-00011, 12 flow ck - OK. All filters turning brown due to cigarette smoke. All filters may be overloaded.
1620 Offsite.
1820 Onsite. Anne Requested pump be removed at this time.

12/15/03

Pescatore Post Cleanup Evaluation
603 W. 10th St. Gregory Parone CDM 12/15/

1822 PIF questionaire completed with Anne.
1831 CE-00010 stopped-post calibrated and sealed in sample bag.
1835 CE-00011 stopped post calibrated and sealed in sample bag.
1840 CE-00012 stopped post calibrated and sealed in sample bag.
Equipment decontaminated.
Residential activity log received from volunteer.
1855 Offsite to CDM Office.
Ref FSDS PA-000028-SA-000151, 52.
Samples locked in sample storage @36 Louisiana Ave.

12/15/03

6 Pescatore - Post Clean Up Evaluation 12/16/03
603 W. 10th St. Gregory Parana CDM/[illegible]

0700 Onsite CDM Office.
0730 Morning meeting. Relinquish(d) samples to Crowell (CE-00010, 11, 12)

12/16/03

Pescatore - Post Clean Up Evaluation 12/16/03
603 W. 10th St. Gregory Parana CDM/[illegible]

Activity: Day 2 of stationary air, personal air sampling @ BD-00[illegible]. Dust sample will also be collected. Sampling will be conducted IAW SAP Addendum, PCE Sampling 12/1/03. Reference pg. 3 for equip. list.
0830 Onsite. CE-00017 attached to pump [illegible]12/16/03 666023 and pre-calibrated with rotometer 92045-1. Sample placed on AP.
0835 CE-00017 started.
CE-00018 (Living Room) placed on pump 2133 and pre-calibrated.
0838 CE-00018 started. (b)
CE-00019 placed on pump 2135 and pre-calibrated. (b)
0840 CE-00019 (Basement) started.
0850 Residential activity log given to the resident. Offsite to CDM office. (b)
1130 Onsite. AP present. (b)
1140 CE-00017 stopped and calibrated.
1141 CE-00017 started. Filter darkened due to cigarette smoke.

12/16/03

Pescatore - Post Clean Up Evaluation 12/16/03
603 W. 10th St - Gregory Parana CDM

1145 CE-00018 flow ck-OK. Filter darkened from cigarette smoke.
1150 CE-00019 flow ck-OK. Filter darkened from cigarette smoke.
1440 Onsite.
1445 CE-00017 stopped and post calibrated CE-00017 placed on pump 666348 and calibrated.
1447 CE-00017 placed on AP and started. Late entry 0800 Pump 612729 calibrated to primary flow B1610, S1521 with microvac cassette in line (Lot #23802).
1505 CE-00020 (dust) collected.
1510 CE-00018 Flow ck-OK. Filter darkened due to cig. smoke.
1517 CE-00019 Flow ck-OK. Filter darkened due to cig. smoke and wood burning stove in basement.
1700 Onsite - Flow Ck-OK Cal Ck-OK. All filters loaded with smoke.
1900 Onsite. 1904 CE-00017 stopped post calibrated and sealed in bag.

12/16/03

Pescatore - PCE Sampling 12/16/03
603 W. 10th St. Gregory Parana CDM

1906 CE-00018 stopped, post calibrated and sealed in sample bag.
1908 CE-00019 stopped, post calibrated and sealed in sample bag. Ref FSDS D-000085, PA-000037, SA-000153, 154. Recieved completed residential activity log from resident. 1915 Offsite. to 2293 KRR.
2000 Samples placed in sample storage @ 318 Louisiana Ave.

12/16/03

12/17/03

Pescatore
603 W. 10th St. - PCE-EPA-Volpe
Author: Gregory Parsons COM

Activity: Day 3 of the PCE - Personal and stationary air samples will be collected in BD-000490. Sampling will be conducted IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment reference pg 3 of this logbook. Anne Pescatore indicated that she did not build a fire in the basement today.

0830 Onsite. CE-00021 placed on pump ~~CE-00~~ 12/17/03 666348 and pre-calibrated with rotometer 12045-1. Sample placed on AP.

0836 CE-00021 started. Anne is smoking.
CE-00022 (Basement) placed on pump 2135 and pre-calibrated.

0843 CE-00022 started.
CE-00023 (Living Room) placed on pump 2133 and pre-calibrated

0845 CE-00023 started.

1130 Onsite

1135 CE-00021 flow ck-OK - Filter darkened from cig. smoke and wood smoke.

12/17/03

12/17/03

Pescatore
603 W. 10th St. - PCE-EPA-Volpe
Author: Gregory Parsons COM

AP indicated that she shoveled ashes from the woodstove in the basement and had trouble starting fire in the stove.

12/17/03

1139 CE-00022 flow ck-OK Filter Ck - Filter = 10% loaded, slightly darkened.

1142 CE-00023 flow ck-OK Filter darkened from cig. smoke.

1150 Offsite

1445 Onsite to replace low vol. pump.

1450 CE-00021 stopped post calibrated and placed on pump 666248 and calibrated.

1451 CE-00021 placed on AP and started.
CE-00023, 22 - flow ck-OK
Filter Ck - OK.

1700 Onsite. CE-00021, 22, 23 Flow ck-OK Filter Ck-smoke

1850 Onsite. CE-00021 stopped post calibrated and sealed.

12/17/03

12/17/03

12 Pescatore
60W W. 10th St. - PCE

1854 CE-00022 (Basement) stopped post-calibrated and sealed.
1855 CE-00023 stopped - post-calibrated and sealed. All equipment decontaminated. Residential Activity Log received from AP. Offsite to CDM office.
1930 Samples locked in sample storage. Out of logbook.

12/17/03

3796 Highway 2 S

BD# 003319

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100304 Page No.: 13-14 Site Visit Date: 1/8/04

Address: 3796 Hwy 2 S. Structure Description: House

Occupant: Elsie Flemming Phone Number: 293-4480

Owner (if different than occupant): N/A Phone Number: N/A

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): [signature] ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	**Date Removal Completed:** 10/03	
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic (Walls interior or exterior) Crawl Space Basement Sub-floor None Other:	Bedroom / Kitchen
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway (Flowerbed) Garden Stockpile (Yard) None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile (Yard) None Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes (No) *If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin:* Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Got the vac 11/5/04 Has not used it
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month Less than once a month Other: Twice a week	The vac will be used twice a week
Heating Source	Wood/Coal Electric Propane/Gas Other: Fuel Oil	
Heat Distribution	(Forced air) Radiant Other:	
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	No	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	No	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION: Associate with samples CE-00026, CE-00027, and CE-00029.

Sheet No.: SA- 000186

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 13-14 Sampling Date: 1/8/04

Address: 3796 Hwy 2 S. Owner/Tenant: Elsie Flemming

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00026		
Location ID	BD-003319		
Sample Group	House		
Location Description	Living Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	0891		
Flow Meter ID No.	92045-1		
Start Date	1/8/04		
Start Time	0901 / 1202		
Start Flow (L/min)	9.01 / 9.01		
Stop Date	1/8/04		
Stop Time	1200 / 2015		
Stop Flow (L/min)	9.21 / 9.01		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ____ Entered (LFO) JD	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by DP	QC by TC

vs 101503

Sheet No.: D- 000086

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100304 Page No: 13-14 Sampling Date: 1/8/04

Address: 3796 Hwy 2 S. Owner/Tenant: Elsie Flemmings

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00027	CE- 00029	CE-00027 (continued)
Location ID	BD-003319	BD-003319	
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), Second Level Other_____	Basement, Ground Floor, Second Level Other N/A	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other N/A	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS (FB-(field blank)) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 (300) 400 NA	100 200 300 (NA)	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal (NA)	Rotometer Dry-Cal NA
Pump ID No.	666023	NA	
Flow Meter ID No.	B1610 51521		
Start Time	1609 / 1613 / 1615		1618
Start Flow (L/min)	2.0 / 2.0 / 2.0		2.0
Stop Time	1611 / 1615 / 1617		1620
Stop Flow (L/min)	2.0 / 2.0 / 2.0	1/8/04	2.0
Pump Fault? (circle)	(No) Yes	No Yes 1/8/04	No Yes
Field Comments Cassette Lot Number: 23802	100 cm^2 - Living Room floor @ front entrance 100 cm^2 - Kitchen shelf of South Wall 100 cm^2 - Floor of Bedroom adjacent Bathroom Archive Blank (circle): Yes No	100 cm^2 100 cm^2 100 cm^2 1/8/04 Archive Blank (circle): (Yes) (No)	100 cm^2 - Top of hot water tank in Bathroom 100 cm^2 100 cm^2 Archive Blank (circle): Yes No
Entered (LFO) ____	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by YP	QC by R

vs 101503

Flemming
3796 Hwy 25.
PCE-EPA/Volpe

1/8/04
Author: Gregory Parent
CDM.

Activity: Stationary Air and dust sampling will be completed inside of BD-003319. All sampling will be conducted IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment: Ref pg. 3 of this logbook.

0850 Onsite. Rotometer 92045-1 will be used to calibrate air samples. Low volume sampling pump 666023 calibrated with dry-cal BIG10 S1521, CE-00026 pre-calibrated.

0901 CE-00026 started. Offsite.

1200 Onsite. CE-00026 Flow ck - Re-calibrated. Filter ck - OK. PIF completed for BD-003319 Offsite.

1605 Onsite. CE-00026 Flow ck - Filter Ck - OK.

1617 CE-00027 (Dust) Collected. CE-00029 Blank exposed and sealed. OFFsite.

1/8/04

1/8/04

Fleming
5796 Hwy 2 S.
Author: Gregory Perna

CDM

2010 On site.

2015 CF-00026 stopped post calibrated and sealed. Equipment decontaminated at the site. Offsite to CDM office. Samples locked in sample storage @ 318 Louisana Ave. Ref FSDS D-000086, SA-000186.

2030 Out of logbook.

1/8/04

713 Michigan Ave

BD# 000263

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100304 Page No.: 15-16 Site Visit Date: 1/12/04

Address: 713 Michigan Ave Structure Description: House

Occupant: Beth Lee Phone Number: 293-4781

Owner (if different than occupant): Same Phone Number: Same

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): YP ps

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	**Date Removal Completed:** 5/03	
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space (Basement) Sub-floor Other: —	
Location of vermiculite remaining indoors	(Attic) ~~Walls (interior or exterior)~~ 5/12/04 Crawl Space Basement Sub-floor None Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: (Basement) (Ground) (Second) Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	Yes 11/12/03 (No) If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	Provided same day as sampling Resident did not have the chance to vacuum house
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week Twice a month Once a month 11/12/04 Less than once a month Other:	
Heating Source	*Wood/Coal* (Electric) *Propane/Gas* Other:	
Heat Distribution	(Forced air) Radiant Other:	
How soon after the removal was a forced *air heating source first used?*	Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Senior citizen house keeping - confidential	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION

Sheet No.: SA- 000207

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 15-16 Sampling Date: 1/12/04

Address: 713 Michigan Ave Owner/Tenant: Beth Lee

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	jp 1/12/04 Cassette 1	jp 1/12/04 Cassette 2	Cassette 3
Index ID	CE- 00030	CE- 00031	
Location ID	BD-000263	BD-000263	
Sample Group	House	House	
Location Description	Kitchen	2nd level East Room	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	0689	0891-A	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/12/04	1/12/04	
Start Time	0822	0827	
Start Flow (L/min)	9.01	9.01	
Stop Date	1/12/04	1/12/04	
Stop Time	jp 1/12/04 1942	1946	
Stop Flow (L/min)	9.01	9.01	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ____ Entered (LFO) jp	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000098

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100304 Page No: 15-16 Sampling Date: 1/12/04

Address: 713 Michigan Ave Owner/Tenant: Beth Lee

Business Name: n/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00034		
Location ID	BD-000263		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), (Second Level) Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400)	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	BT 666389		
Flow Meter ID No.	B1610 / S1521		
Start Time	1438 / 1441 / 1445	1443	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1440 / 1443 / 1447	1450	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 Ground floor on carpeting near front entrance	400 cm^2 2nd level floor center of east Room	100 cm^2
Cassette Lot Number: 23607	100 cm^2 Ground floor window sill	100 cm^2	100 cm^2
	100 cm^2 2nd level floor at top of steps	100 cm^2	100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

1/12/04

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

713 Michigan Ave · Beth Lee 1/12/04
PCE-EPA-Volpe
15

Author: Gregory Renna

Activity: Station air and dust samples will be collected as part of the post cleanup evaluation. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, PCE Sampling 12/1/03. Equipment: Refer to pg 3 of this logbook.

0815 Onsite. Sampling pumps plugged in to warm up. Rotometer 92045-1 used to pre-calibrate air samples. CE-00030 pre-calibrated.

0822 CE-00030 started (Kitchen) CE-00031 pre-calibrated.

0827 CE-00031 started (2nd level) Offsite to 1212 Louisiana.

1115 Onsite. CE-00030, 31 flow ck-OK Filter Ck-OK.

1400 Onsite. HEPA vac orientation conducted with Beth Lee. HEPA vac S/N 0315000827 given to resident. CE-00030, 31 Flow Clc. Pump Clc OK.

1/12/04

16 713 Michigan Ave - Lee 1/12/04
PCE-EPA-Volpe
Author: Gregory Parsons
Late Entry: Pump 666389 calibrated with dry-cal B1610/S1521. PIF completed.
1450 CE-00034 collected. Deviation to SAP noted. Sample collected from 3 high traffic areas and one horizontal surface on 1st and 2nd level of home. Offsite
1700 Onsite. Pump Clc-Olc Flow Clc-Olc.
1942 CE-00030 stopped, post calibrated and sealed.
1946 CE-00031 stopped, post calibrated and sealed. All equipment decontaminated. Ref FSDS SA-000207, D-000098 and PIF BDH 000263. Offsite to CDM office. Samples locked in sample storage.
2030 ~~OFF~~ 1/12/04 Out of logbook.
HEPA vac not used before Sampling 1/12/04

1/12/04

505 Louisiana Ave

BD# 002032

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100304 Page No.: 17-18 Site Visit Date: 1/13/04

Address: 505 Louisiana Ave. Structure Description: Perez 11/18/04 House

Occupant: Perez Phone Number: 293-7344

Owner (if different than occupant): same Phone Number: same

Business Name: N/A

Sampling Team: PARANA - CDM

Field Form Check Completed by (100% of forms): JP JPS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	**Date Removal Completed:** 3/03	
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	Attic Above Foyer
Location of vermiculite remaining indoors	(Attic) (Walls (interior or exterior)) JPS 5/4/04 Crawl Space Basement Sub-floor None Other:	~~NE Walls~~ JPS 5/4/04
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) (Second) (Garage) Attic Other:	Sealed vermiculite in garage attic in place
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed-outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: (Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week More than once a week (Twice a month) Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal Electric (Propane/Gas) Other:_____	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Lincoln County Public School Admistration Building	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite? No- Removal conducted in 2003

ADDITIONAL INFORMATION_____

Sheet No.: SA-000214

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 17-18 Sampling Date: 1/13/04

Address: 505 Louisiana Ave. Owner/Tenant: Perez

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (1/13/04)	Cassette 2 (1/13/04)	Cassette 3
Index ID	CE- 00039	CE- 00040	
Location ID	BD-002032	BD-002032	
Sample Group	House	House	
Location Description	Ground level Kitchen	2nd level @ top of steps	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	0891-A	0689	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/13/04	1/13/04	
Start Time	0850	0852	
Start Flow (L/min)	9.01	9.01	
Stop Date	1/13/04	1/13/04	
Stop Time	2005	2010	
Stop Flow (L/min)	9.01	9.01	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			1/13/04
Cassette Lot Number: 32415	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ____ Entered (LFO) JB	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000102

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100304 Page No: 17-18 Sampling Date: 1/13/04

Address: 505 Louisiana Ave. Owner/Tenant: Perez

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1 (JP 1/13/04)	Cassette 2	Cassette 3
Index ID	CF- 00061		
Location ID	30-002032		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	612058	JP 1/13/04	
Flow Meter ID No.	B1610 / S1521		
Start Time	1416 / 1420 / 1426	1429	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1418 / 1422 / 1428	1431	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments Cassette Lot Number: 23802	100 cm^2 Ground level on floor @ front entrance 100 cm^2 Ground level kitchen window sill 100 cm^2 2nd level on floor Archive Blank (circle): Yes No	100 cm^2 2nd level top of book shelf. 100 cm^2 100 cm^2 Archive Blank (circle): Yes No	100 cm^2 100 cm^2 JP 1/13/04 100 cm^2 Archive Blank (circle): Yes No
Entered (LFO) JB	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503—

505 Louisiana Ave. - Perez 1/13/04 17
PCE-EPA/Volpe
Author: Gregory Perez CDM

Activity Stationary Air and Dust samples will be collected inside of BD-002052. Sampling will be conducted in level D PPE IAW SAP Addendum, GSS, PCE sampling 12/1/03: Equipment Ref #3 of this logbook. Rotometer 92045-1 will be used to calibrate air samples. Dry Cal B1610 S 1521 used to calibrate low volume pump 612058 @ CDM office prior to dust sampling.

0842 Onsite. Mr. Perez present. CE-00039 pre-calibrated.

0850 CE-00039 (Kitchen) started. CE-00040 pre-calibrated.

0852 CE-00040 (2nd level) started Offsite.

1130 Onsite. PIF # BD-002052 completed. Flow Ck-OK and Filter Ck-OK. Offsite to 1545 Ski Rd.

1/13/04

505 Louisiana Ave. - Area 11/3/04
PCE - EPA/Volpe
Author Gregory Parana CDM
1405 Onsite. (A)
1431 CE-00061 collected. Equipment decontaminated. Flow Ck-Ok. Filter Ck-Ok. Offsite to 154 Sk. Rd. (B)
1730 Onsite. Resident not home.
2005 CE-00039 stopped, post calibrated and sealed.
2010 CE-00040 stopped, post calibrated and sealed.
All equipment decontaminated. Offsite to CDM office.
Ref FSDS D-000102, SA-000214.
Samples locked in sample storage. 2030 out of log book.

11/3/04

1118 California Ave

BD# 000647

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100304 Page No.: 19-20 Site Visit Date: 1/19/04

Address: 1118 California Ave. Structure Description: House

Occupant: Javier & Berta Fernandez Phone Number: 293-3017

Owner (if different than occupant): Jene Smith Phone Number:

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): MP JS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders) - **Date Removal Completed:** 03/03		
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	Yes (No) If Yes, which floors: Basement Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed - Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week (More than once a week) Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal Electric (Propane/Gas) Other:_____	
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	Unknown	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Plum creek lc contractor	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION Different Tenant lives in house than when removal was conducted. Tenant speaks broken english (spanish). Tenants were not sure 1/19/10 exactly what was completed during the remediation. Removal folder used to complete

JP 1/19/10 PDF

Sheet No.: SA-000188

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 1995 Sampling Date: 1/19/04

Address: 1118 California Ave. Owner/Tenant: Hilary Fe Fernandez

Business Name: N/A Jilene Smith Javier & Berta

Land Use: Residential School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC CDM Other _____ Names: PARENA

Data Item	1/19/04 Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00079		
Location ID	AA-000647		
Sample Group	House		
Location Description	Kitchen/Hallway		
Category (circle)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	Indoor Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	25mm 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotameter DryCal NA	Rotameter DryCal NA	Rotameter DryCal NA
Pump ID Number	05913		
Flow Meter ID No.	92045-1		
Start Date	1/19/04		
Start Time	0845		
Start Flow (L/min)	9.01		
Stop Date	1/19/04		
Stop Time	2003		
Stop Flow (L/min)	9.01		
Pump fault? (circle)	No Yes NA	No Yes NA	No Yes NA
MET Station onsite?	No Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments	Filter overloaded with black dust during last 2 hours of sample period		1/19/04
Cassette Lot Number:	32415		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ____ Entered (LFQ) ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by BM	QC by TR

vs 101503

Sheet No.: D- 000106

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100304 Page No: 19-20 Sampling Date: 1/19/04

Address: 1118 California Ave. (Owner)/Tenant: Smith

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PHRANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00080		
Location ID	BD-000647		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	(Horizontal Surfaces) (High Traffic Areas) Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	626666		
Flow Meter ID No.	B1610-51521	JP 1/19/04	
Start Time	1425 / 1428 / 1432	1437	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1427 / 1430 / 1434	1439	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0 JP 1/19/04	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes
Field Comments	100 cm^2 - Living Room Floor	100 cm^2 - Top of hot water heater	100 cm^2
Cassette Lot Number: 23802	100 cm^2 - Kitchen top of Refridgerator	100 cm^2	100 cm^2 JP 1/19/04
	100 cm^2 - Hallway Floor	100 cm^2	100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) JP	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

1118 California Ave - Jilene Smith
PCE - EPA/Volpe 11/9/04
Author: Gregory Parana CDM
Activity: Stationary Air and dust samples will be collected as part of the PCE. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, PCE Sampling 12/1/04. Rotometer 92045-1 will be used to calibrate the air samples. Dry Cal B1610-S1521 will be used to calibrate LV pump for dust sampling.
Equipment: Refer to 3 of this logbook. Alman Cano was the previous tenant but today Javier e Berta Fernandez now are the tenants. They agreed to allow the PCE to continue.
0840 Onsite. CE-00079 pre-calibrated.
0845 CE-00079 started.
PIF BD-000647 completed with tenants Offsite.
1150 Onsite. Flow Ck, Filter Ck-Ok.
1420 Onsite. Flow Ck Filter Ck - Ok. Tenants present.

11/9/04

20 1118 California Ave - Smith 1/19/04
PCE - EPA - Volpe
Author: Gregory Parana com
1439 CE-00080 (Dust) collected.
1/19/04 Ref FSDS ID-000106.
1620 Onsite Pump CK-OK ~~1/19/04~~
Filter CK-OK.
2003 CE-00079 stopped post-calibrated
and sealed. Equipment
decontaminated. Offsite.
2020 Onsite @ CDM office.
Samples locked in sample
storage. Ref FSDS D-000106,
SA-000188
2041 Out of logbook

1/19/04

1120 California Ave

BD# 000646

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100304 Page No.: 21-23 Site Visit Date: 1/20/04

Address: 1120 California Ave. Structure Description: House

Occupant: Josh Parrish Phone Number: 293-5882

Owner (if different than occupant): Jolene Smith Phone Number: 503-704-1404

Business Name: N/A

Sampling Team: PARANA

Field Form Check Completed by (100% of forms): JP JS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		Date Removal Completed: 3/15/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	Just Kneewalls
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	Unknown per 1/21/04
Interior cleaning conducted during removal	Yes (No) If Yes, which floors: Basement Ground Second Garage Attic Other:	per 1/21/04 ~~Unknown~~
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	(Once a week) More than once a week Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal Electric (Propane/Gas) Other:_____	
Heat Distribution	(Forced air) Radiant Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	No	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION Close out folder + Interview used to complete PIF. Tenant had been there for only 2 wks and was unsure of what took place during the removal.

Sheet No.: SA- 000156

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 21-23 Sampling Date: 1/20/04

Address: 1120 California Ave Owner/Tenant: Josh Parrish → Jilene Smith

Business Name: NIA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00082	CE- 00083	
Location ID	BD-000646	BD-000646	
Sample Group	~~House~~ basement	JD 1/21/04 ~~House~~ basement	1/21/04 JD
Location Description	Basement	Basement	
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	(FR) (FD) (FR) 1/21/04 FS FB-(field blank) LB-(lot blank)	FS FB-(field/blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	(Indoor) Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	(25mm) 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	(Rotometer) DryCal NA	Rotometer DryCal NA
Pump ID Number	0689	0891-A	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/20/04	1/20/04	
Start Time	1005	1005	
Start Flow (L/min)	9.03	9.03	
Stop Date	1/20/04	1/20/04	
Stop Time	2038	2038	
Stop Flow (L/min)	9.03	9.03	
Pump fault? (circle)	(No) Yes NA	(No) Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	(No) Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments		Field Replicate of sample CE-00082	JP 1/20/04
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) _____ Entered (LFO) JB	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by GP	QC by R

vs 101503

Sheet No.: D- 000108

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: 100304 Page No: 21-23 Sampling Date: 11/20/04

Address: 1120 California Owner/Tenant: Josh Parrish → Jilene Smith

Business Name: N/A

Land Use: Residential School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC CDM Other _____ Names: Parsons

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00086		
Location ID	B0-000646		
Sample Group (circle) (Subgroup of the property)	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other
Location Description (circle) (Detailed description point within the location)	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other	Basement, Ground Floor, Second Level Other
Matrix Type (circle)	Horizontal Surfaces, High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other
Category (circle)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 600 NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	25mm 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM-.45 PCM- 0.8	TEM-.45 PCM- 0.8	TEM-.45 PCM- 0.8
Flow Meter Type (circle)	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	626666		
Flow Meter ID No.	B1610-51521	JP 11/20/04	
Start Time	1326 / 1329 / 1334	1338 / 1341 / 1344	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0 / 2.0	
Stop Time	1328 / 1331 / 1336	1340 / 1343 / 1346	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0 / 2.0 / 2.0	
Pump Fault? (circle)	No Yes	No Yes	No Yes
Field Comments	100 cm^2 Ground level floor in living room 100 cm^2 - Ground level top of refrigerator 100 cm^2 - 2nd level on floor of room at top of steps	100 cm^2 2nd level - Master Bedroom window sill 100 cm^2 - Basement floor @ base of steps 100 cm^2 - Basement floor of hot water heater	100 cm^2 100 cm^2 100 cm^2
Cassette Lot Number:			JP 11/20/04
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) JB	Volpe: Entered ___ Validated ___	Entered ___ Validated ___	Entered ___ Validated ___

For Field Team Completion (Provide Initials)	Completed by GY	QC by TC

vs 101503

Sheet No.: SA-000156

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 21-23 Sampling Date: 1/20/04

Address: 1120 California Ave Owner/Tenant: Josh Parrish → Jilene Smith

Business Name: n/a

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: Barbara

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00082	CE- 00083	
Location ID	[illegible]	[illegible]	
Sample Group	House - basement	Pilot House basement	1/21/04 BG
Location Description	Basement	Basement	
Category (circle)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	Indoor Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	25mm 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotameter DryCal NA	Rotameter DryCal NA	Rotameter DryCal NA
Pump ID Number	0689	0891-A	
Flow Meter ID No.	92045-1	92045-1	
Start Date	1/20/04	1/20/04	
Start Time	1005	1005	
Start Flow (L/min)	9.03	9.03	
Stop Date	1/20/04	1/20/04	
Stop Time	2035	2035	
Stop Flow (L/min)	9.03	9.03	
Pump fault? (circle)	No Yes NA	No Yes NA	No Yes NA
MET Station onsite?	No Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments		Field Replicate of sample CE-00082	1/20 TSP
Cassette Lot Number: _____	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) _____ Entered (LFQ) [illegible]	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____	Volpe: Entered _____ Validated _____

For Field Team Completion (Provide initials)	Completed by GP	QC by TR

va 101503

1120 California Ave - Smith 11/20/04
PCE-EPA/Volpe Tenant-Parrish 21
Author: Gregory Parrish COM
Activity: Stationary Air and dust sampling will be completed as part of the PCE. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, PCE Sampling 12/1/03.
Equipment: Refer to this logbook. 0720 LV Pump 626666 calibrated to 2.0 l/min with Dry-Cal BIGIO-51521 @ COM office.
0825 Onsite. Nobody answered the door. Called and left a message.
0945 Contacted by volunteer and given permission to complete the sampling.
0955 Onsite. CE-00082, 83 pre-calibrated. CE-00083 is a field replicate of CE-00082.
1005 CE-00082, 83 started. CE-00084 pre-calibrated.
1010 CE-00084 started. (Ground level). CE-00085 pre-calibrated.
1012 CE-00085 started. (2nd level).
PLF BA-000646 completed with Josh Parrish.

11/20/04

1120 California Ave Owner - Smith 11/20/04
PCE-EPA-Volpe Tenant - Parrish
Author Gregory Parrano CDM

1325 Onsite.

1346 CE-00086 (Dust) collected.
CE-00084, 85 Filters appear to be loaded with smoke.
Flow ck all samples - OK.

1650 Onsite. CE-00082, 83, 84, 85 loading with smoke. Furnace may need filter changed.

2030 Onsite. Samples will be stopped. CE-00084, 85 appear to be heavily loaded with smoke particulate.

2038 CE-00082, 83 stopped, post calibrated and sealed.

2046 CE-00084 stopped, post calibrated and sealed.

2050 CE-00085 stopped, post calibrated and sealed.

Equipment decontaminated Offsite. Resident was informed of furnace filter. He changed it before I left site. Filter was very clogged.

11/20/04

1120 California Ave. Owner - Smith 11/20/04
PCE EPA-Volpe Tenant - Parrish
Author: Gregory Parrano CDM

2100 Onsite CDM office. Samples placed in sample storage. Ref FSDS SA-000156, 210, D-000108.

2130 Out of log book.

11/20/04

1231 Nevada Ave

BD# 001197

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100304 Page No.: 24 Site Visit Date: 1/27/04

Address: 1231 Nevada Ave. Structure Description: House

Occupant: Jean Sonju Phone Number: 293-5655

Owner (if different than occupant): same Phone Number: same

Business Name: N/A

Sampling Team: PARANA, CDM

Field Form Check Completed by (100% of forms): YP PS

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)		**Date Removal Completed:** 10/03
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic Walls (interior or exterior) Crawl Space Basement Sub-floor (None) Other:	
Interior cleaning conducted during removal	Yes (No) If Yes, which floors: Basement Ground Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway (Flowerbed) Garden Stockpile Yard None Other:	Along back of house
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately 1 to 2 months (3 to 4 months) 5 to 6 months more than 6 months	Recieved 1 week ago
How often do you vacuum with your EPA provided HEPA vacuum?	Once a week (More than once a week) Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal Electric Propane/Gas Other: Fuel Oil	
Heat Distribution	(Forced air) Radiant Other:_____	Ceiling vents
How soon after the removal was a forced air heating source first used?	(Immediately) 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Son - Libby Dam Jean - 1 Afternoon/month she volunteers at the Libby Thrift Shop - 508 Utah	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000174

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 24 Sampling Date: 1/26/04 1/26/04

Address: 1231 Nevada Ave. Owner/Tenant: Jean Sonju

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00104		
Location ID	BD-001197		
Sample Group	House		
Location Description	Master Bedroom		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	05913		
Flow Meter ID No.	42045-1		
Start Date	1/26/04		
Start Time	0810		
Start Flow (L/min)	9.03		
Stop Date	1/26/04		
Stop Time	1930		
Stop Flow (L/min)	9.24		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			1/26/04
Cassette Lot Number:	310201 32415 1/26/04		
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ___ Entered (LFO) XB	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

Sheet No.: D- 000118

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

d Logbook No: 100304 Page No: 24 Sampling Date: 1/26/04

Jress: 1231 Nevada Ave. Owner/Tenant: Jean Sonju

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00105		
Location ID	BD-001197		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), Second Level Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	~~Horizontal Surfaces~~ (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
ategory (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 ~~300~~ 400 NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	502077		
Flow Meter ID No.	B1610 - S1521	1/26/04	
Start Time	1118 / 1121 / 1124	1128	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1120 / 1123 / 1126	1130	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0 1/26/04	
Pump Fault? (circle)	(No) Yes	(No) Yes	No Yes
Field Comments	100 cm^2 Living Room Floor	100 cm^2 Living Room window sill	100 cm^2
Cassette Lot Number:	100 cm^2 - Master Bedroom floor	100 cm^2	100 cm^2 1/26/04
	100 cm^2 - Writing room top of desk.	100 cm^2	100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO)	Volpe: Entered ____ Validated ____	Entered ____ Validated ____	Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

24 1231 Nevada Ave. - Sonju 1/26/04
PCE - EPA/Volpe
Author: Gregory Paruna CDM
Activity: Stationary Air and dust samples will be collected as part of the PCE. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, Post Clean Up Evaluation Sampling.
Equipment: Ref pg 3 of this logbook.
LV Pump 502077 calibrated with DryCal B1610-S1521@ CDM office 0720.
0800 Onsite. CE-00104 pre-calibrated.
0810 CE-00104 started (Bedroom).
1100 Onsite. CE-00104 flow Ck-OK Filter Ck-OK.
1130 CE-00105 (Dust) collected. Offsite to 1417 Washington.
1420 Onsite. Flow Ck Filter Ck-OK. PIF-BD-000197 completed with Jean Sonju. Offsite.
1710 Onsite. Flow Ck Filter Ck-OK.
1930 Onsite. CE-00104 stopped post calibrated and sealed. Equipment decontaminated.
2010 Onsite CDM office. Samples placed in Sample storage. Ref FSDS SA-000174, D-000118. Out of logbook.
1/26/04

1202 Idaho Ave

BD# 000237

LIBBY ASBESTOS PROJECT
Pre-Sampling Interview Form (PIF) for Post Clean-up Evaluation Sampling

Field Logbook No.: 100304 Page No.: 25 Site Visit Date: 1/29/04

Address: 1202 Idaho Ave. Structure Description: House

Occupant: Bill McGough Colleen Delk-Marshal Phone Number: 293-2483

Owner (if different than occupant): Delk Marshal Phone Number: same

Business Name: N/A

Sampling Team: PARANA - COM

Field Form Check Completed by (100% of forms): JP JP

Data Item	Value	Notes
CLEAN-UP SUMMARY (To be completed using removal completion folders)	Date Removal Completed: 12/03	
Location of vermiculite removed indoors	(Attic) Walls (interior or exterior) Crawl Space Basement Sub-floor Other:	
Location of vermiculite remaining indoors	Attic (Walls (interior or exterior)) Crawl Space Basement Sub-floor None Other:	
Interior cleaning conducted during removal	(Yes) No If Yes, which floors: Basement (Ground) Second Garage Attic Other:	
Was carpet removed during removal activities?	Yes (No) NA	
Location of vermiculite removed outdoors	Driveway (Flowerbed) Garden Stockpile Yard None Other:	
Location of vermiculite remaining outdoors	Driveway Flowerbed Garden Stockpile Yard (None) Other:	

Data Item	Value	Notes
Pre-Sampling Interview (To be completed with resident)		
Has EPA provided a HEPA vacuum and has it been used since removal?	(Yes) No If Yes, how long after the removal was completed did use of the EPA-issued HEPA vac begin: Immediately (1 to 2 months) 3 to 4 months 5 to 6 months more than 6 months	
How often do you vacuum with your EPA provided HEPA vacuum?	(Once a week) More than once a week Twice a month Once a month Less than once a month Other:_____	
Heating Source	Wood/Coal (Electric) Propane/Gas Other:_____	
Heat Distribution	Forced air (Radiant) Other:_____	
How soon after the removal was a forced air heating source first used?	Immediately 1 to 2 months 3 to 4 months 5 to 6 months more than 6 months	No Forced air heat
Have any of the occupants been in contact with any vermiculite since the removal was completed?	Yes (No) Unknown	Explain:
Addresses of other homes or properties where the occupants visit and may contain vermiculite	None	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?
Addresses or names of business where occupants work	Retired	To be completed by field personnel: Do these properties currently have indoor or outdoor vermiculite?

ADDITIONAL INFORMATION_____

Sheet No.: SA- 000179

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR STATIONARY AIR

Field Logbook No: 100304 Page No: 25 Sampling Date: 1/29/04

Address: 1202 Idaho Ave Owner/Tenant: Delk-Marshall

Business Name: NLA

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00113		
Location ID	BD-000237		
Sample Group	House		
Location Description	South Sewing Room		
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Matrix Type (circle)	(Indoor) Outdoor NA	Indoor Outdoor NA	Indoor Outdoor NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	TEM- .45 (PCM- 0.8)	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	(Rotometer) DryCal NA	Rotometer DryCal NA	Rotometer DryCal NA
Pump ID Number	0689		
Flow Meter ID No.	92045-1		
Start Date	1/29/04		
Start Time	0840		
Start Flow (L/min)	9.03		
Stop Date	1/29/04		
Stop Time	1955		
Stop Flow (L/min)	9.03		
Pump fault? (circle)	(No) Yes NA	No Yes NA	No Yes NA
MET Station onsite?	(No) Yes NA	No Yes NA	No Yes NA
Sample Type	Pre Post Clear 2nd Clear 3rd Clear (NA)	Pre Post Clear 2nd Clear 3rd Clear NA	Pre Post Clear 2nd Clear 3rd Clear NA
Field Comments			JP 1/29/04
Cassette Lot Number: 310201	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
QC (Field Team) ____ Entered (LFO) ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____	Volpe: Entered ____ Validated ____

For Field Team Completion (Provide Initials)	Completed by	QC by

vs 101503

000133

Sheet No.: D- _____

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

d Logbook No: 100304 Page No: 25 Sampling Date: 1/29/04

dress: 1202 Idaho Ave Owner/Tenant: Delk-Marshall

Business Name: N/A

Land Use: (Residential) School Commercial Mining Roadway Other ( )

Sampling Team: MACTEC (CDM) Other _____ Names: PARANA

Data Item	Cassette 1	Cassette 2	Cassette 3
Index ID	CE- 00114		
Location ID	BD-000237		
Sample Group (circle) (Subgroup of the property)	Garage, (House), Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____	Garage, House, Shed, Pump House Other_____
Location Description (circle) (Detailed description point within the location)	Basement, (Ground Floor), Second Level Other_____	Basement, Ground Floor, Second Level Other_____	Basement, Ground Floor, Second Level Other_____
Matrix Type (circle)	(Horizontal Surfaces), (High Traffic Areas) Other_____	Horizontal Surfaces High Traffic Areas Other_____	Horizontal Surfaces High Traffic Areas Other_____
Category (circle)	(FS) FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)	FS FB-(field blank) LB-(lot blank)
Sample Area (cm^2) (circle)	100 200 300 (400) NA	100 200 300 NA	100 200 300 NA
Filter Diameter (circle)	(25mm) 37mm	25mm 37mm	25mm 37mm
Pore Size (circle)	(TEM- .45) PCM- 0.8	TEM- .45 PCM- 0.8	TEM- .45 PCM- 0.8
Flow Meter Type (circle)	Rotometer (Dry-Cal) NA	Rotometer Dry-Cal NA	Rotometer Dry-Cal NA
Pump ID No.	626666		
Flow Meter ID No.	B1610 - S1521	1/29/04	
Start Time	1146 / 1150 / 1154	1157	
Start Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Stop Time	1148 / 1152 / 1156	1159	
Stop Flow (L/min)	2.0 / 2.0 / 2.0	2.0	
Pump Fault? (circle)	(No) Yes	No ~~Yes~~ 2/2/04	No Yes
Field Comments	100 cm^2 Living Room window sill	100 cm^2 Kitchen top of Refridgerator	100 cm^2
Cassette Lot Number:	100 cm^2 Hallway Floor	100 cm^2	100 cm^2 1/29/04
	100 cm^2 - Dining Rm Floor	100 cm^2	100 cm^2
	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No
Entered (LFO) _____	Volpe: Entered ___ Validated ___	Entered _____ Validated _____	Entered _____ Validated _____

For Field Team Completion (Provide Initials)	Completed by	QC by

1202 Idaho Ave · Delk-Marshall 11/29/04
PCE-EPA-Volpe
Author: Gregory Perona [redacted] CDM
Activity: Stationary Air and dust samples will be collected as part of the PCE in BD-000237. Sampling will be conducted in level D PPE IAW SAP Addendum, CSS, PCE Sampling 1/12/03. Equipment Ref pg 3 of this logbook.
LV Pump 626666 calibrated with Dry-Cal BIG10 · S1521 @ 720.
0835 Onsite. CE-00113 pre-calibrated
0840 CE-00113 (Sewing Rm) started.
1135 Onsite. PIF BD 000237 completed with Bill McGough.
1159 CE-00114 (dust) collected. CE-00113 flow Ck, filter Ck - OK.
1520 Onsite. CE-00113 Flow, Filte Ck-OK
1955 Onsite CE-00113 stopped post calibrated and sealed.
2010 Onsite @ CDM office. Samples locked in sample storage.
2020 Out of logbook. Ref FSUS D-000133, SA-000179.

11/29/04

[redacted]

Appendix B
Libby Field Office Record of Modification Forms

Request for Modification

to the

Libby Sampling and Quality Assurance Project Plan

Field Activities

LFO-000064a

(Clarification to LFO-000064a is detailed in italics below.)

Instructions to Requester: **Fax to contacts at bottom of form for review and approval.**
File approved copy with Data Manager at the Libby Field Office (LFO).
Data Manager will maintain legible copies in a binder that can be accessed by LFO personnel.

Project QAPP (circle one): Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) Contaminant Screening Study (approved 5/02)
Other (Title and approval date): This modification applies to all project QAPPs governing dust sampling activities and all air sampling activities with the exception of clearance air sampling activities.

SOP (Number and Revision No.): dust sampling procedures are detailed in the Dust Sampling and Analysis Plan for Libby, MT, Rev. 0 (estimated July, 2003); air sampling procedures are detailed in the respective QAPPs.

Other Document (Title, Number/Revision):

Requester: Terry Crowell Title: Sample Coordinator
Company: CDM Date: 7/15/03

Description of Modification:
For dust (microvacuum) and air samples, field blanks will be collected at a frequency of one per team per day and analyzed at a frequency of one per team per week. The field blanks to be analyzed each week will be designated by the Libby sample coordinator to evaluate each team's sample collection technique. *Because field teams are currently collecting either dust or air samples, the blanks to be analyzed each week will be independent of media. The appropriate quality control sample analysis frequency (see attached table) will be maintained for air and dust samples independently. If at any point field teams are requested to collect both air and dust samples, the sample coordinator will ensure that the appropriate quality control sample analysis frequency is maintained for each medium.* Those field blanks collected but not submitted for analysis will be archived in the event contamination in field blanks is observed. Frequency of field blanks collected for clearance air sampling is not included in this modification and will remain as defined I the Response Action Work Plan (estimated August 2003).

Field logbook and page number modification is documented on: 1-00011, page 41

Reason for modification:
As written in the referenced analytical methods, quality control sample collection frequency is exceptionally high given the number of sampling locations that will be visited as part of the Libby project; and has therefore been reduced to meet the current needs of the project. That is, historical site data for field blanks (collected at the previous higher frequency) indicate that occurrence of Libby Amphibole contamination on field blanks is sufficiently rare to justify a reduction in the number of field blanks analytically tested.

Duration of Modification (circle one):

Temporary Date(s): _____

Resident address(es): _____

_____

- If appropriate, attach a list of all applicable Index Identification numbers.

Permanent (complete Proposed Modification Section) Effective Date: July 7, 2003

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable): Section B2, Field QA/QC Samples, page 21

Technical Review: _____ Date: _____
(Volpe Project Manager or designate)

Approved By: _____ Title: _____ Date: _____
(USEPA Remedial Project Manager or designate)

SUMMARY OF FIELD BLANK RESULTS ANALYZED BY TEM-ISO 10312

ection Frequency (DF)

Mineral Type	Direct N samples total =1334		Indirect N samples total = 371	
	N detects [a]	DF	N detects	DF
LA	2	*0.15%*	4	*1.08%*
OA	0	*0.00%*	1	*0.27%*
C	2	*0.15%*	35	*9.43%*
Total	4	*0.30%*	39	*10.51%*

DF = number of field blanks with 1 or more structures / total number of field blanks

[a] Based on all structures (regardless of dimensions).

Loading (s/mm^2)

Mineral Type	Direct				Indirect			
	Total N	avg (all)	avg (detects)	max (detects)	N structures	avg (all)	avg (detects)	max (detects)
LA	4	0.03	21.8	27.3	6	0.20	19.0	31.3
OA	0	all ND	--	--	1	0.04	16.4	16.4
C	4	0.03	18.6	27.3	97	3.62	38.4	344.3
Total	8	0.0607	20.2	27.3	104	3.87	36.8	344.3

Loading (s/mm^2) = N structures / (GOs counted · GO Area)

Loading (s/sample)

Mineral Type	Direct			Indirect		
	avg (all)	avg (detects)	max (detects)	avg (all)	avg (detects)	max (detects)
LA	0.003	2.0	3	0.016	1.5	2
OA	all ND	--	--	0.003	1.0	1
C	0.003	2.0	3	0.261	2.8	21
Total	0.006	2.0	3	0.280	2.7	21

**ding (s/sample) = N structures / N samples total, where 10 GOs per sample

SUMMARY OF FIELD BLANK RESULTS ANALYZED BY TEM-AHERA/ASTM

Detection Frequency (DF)

Mineral Type	Direct N samples total =1267		Indirect N samples total = 77	
	N detects [a]	DF	N detects	DF
LA	1	*0.08%*	0	*0.00%*
OA	0	*0.00%*	0	*0.00%*
C	1	*0.08%*	0	*0.00%*
Total	2	*0.16%*	0	*0.00%*

DF = number of field blanks with 1 or more structures / total number of field blanks

[a] Based on all structures (regardless of dimensions).

Loading (s/mm^2)

Mineral Type	Direct				Indirect			
	Total N	avg (all)	avg (detects)	max (detects)	N structures	avg (all)	avg (detects)	max (detects)
Total Asb	2	0.01	4.4	8.0	0	ND	--	--

Loading (s/mm^2) = N structures / (GOs counted · GO Area)

Loading (s/sample, 10 GOs per sample)

Mineral Type	Direct			Indirect		
	avg (all)	avg (detects)	max (detects)	avg (all)	avg (detects)	max (detects)
Total Asb	0.002	1.0	1.0	ND	--	--

Loading (s/sample) = N structures / N samples total, where 10 GOs per sample

Note: Calculations exclude all Lab QC samples (eg: Recounts), analyses in which GO was not = 10, and potential duplicate analyses. Based on Libby2 Database download dated January 5, 2004.

Request for Modification

to the

Libby Sampling and Quality Assurance Project Plan

Field Activities

LFO-000064b

(Clarification to LFO-000064 is detailed in italics below.)

Instructions to Requester: **Fax to contacts at bottom of form for review and approval.**
File approved copy with Data Manager at the Libby Field Office (LFO).
Data Manager will maintain legible copies in a binder that can be accessed by LFO personnel.

Project QAPP (circle one): Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) Contaminant Screening Study (approved 5/02)
Other (Title and approval date): This modification applies to all project QAPPs governing dust sampling activities and all air sampling activities with the exception of clearance air sampling activities.

SOP (Number and Revision No.): dust sampling procedures are detailed in the Dust Sampling and Analysis Plan (SAP) for Indoor Dust for Use at the Libby, Montana, Superfund Site Rev. 0 (August 7, 2003); air sampling procedures are detailed in the respective QAPPs.

Other Document (Title, Number/Revision): _____

Requester: Terry Crowell *Title:* Sample Coordinator
Company: CDM Date: 01/27/04

Description of Modification:
For dust (microvacuum) and air samples, field blanks will be collected at a frequency of one per team per day and analyzed at a frequency of one per team per week. The field blanks to be analyzed each week will be designated by the Libby sample coordinator to evaluate each team's sample collection technique. Because field teams are currently collecting **either** dust or air samples, the blanks to be analyzed each week will be independent of media. The appropriate quality control sample analysis frequency (see attached table) will be maintained for air and dust samples independently. If at any point field teams are requested to collect both air and dust samples, the sample coordinator will ensure that the appropriate quality control sample analysis frequency is maintained for each medium. Those field blanks collected but not submitted for analysis will be archived in the event contamination in field blanks is observed. Frequency of field blanks collected for clearance air sampling is not included in this modification and will remain as defined I the Response Action Work Plan (estimated August 2003). *Although the Dust SAP was approved subsequent to Modification #64, field blanks collected under the Dust SAP will be collected and analyzed at the frequency established in Modification #64.*

Field logbook and page number modification is documented on: 1-00011, page 41

Reason for modification:
As written in the referenced analytical methods, quality control sample collection frequency is exceptionally high given the number of sampling locations that will be visited as part of the Libby project; and has therefore been reduced to meet the current needs of the project. That is, historical site data for field blanks (collected at the previous higher frequency) indicate that occurrence of Libby Amphibole contamination on field blanks is sufficiently rare to justify a reduction in the number of field blanks analytically tested.

Duration of Modification (circle one):

Temporary Date(s): _____

Resident address(es): _____

_____

- If appropriate, attach a list of all applicable Index Identification numbers.

Permanent (complete Proposed Modification Section) Effective Date: July 7, 2003

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable): Section B2, Field QA/QC Samples, page 21

Technical Review: _____ Date: _____
(Volpe Project Manager or designate)

Approved By: _____ Title: _____ Date: _____
(USEPA Remedial Project Manager or designate)

Record of Modification

to the

Libby Sampling and Quality Assurance Project Plan

Field Activities

LFO-000078

Instructions to Requester: **Fax to contacts at bottom of form for review and approval.**
File approved copy with Data Manager at the Libby Field Office (LFO).
Data Manager will maintain legible copies in a binder that can be accessed by LFO personnel.

Project QAPP (circle one): Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) **Contaminant Screening Study** (approved 5/02)
Other (Title and approval date): _____

SOP (Number and Revision No.): Asbestos Hazard Emergency Response Act 40 CFR, Chapter 1, Subchapter R, Part 763, Subpart E, Appendix A (October 1987)

Other Document (Title, Number/Revision): Final Sampling and Analysis Plan Addendum (SAP Addendum), Post Clean-Up Evaluation Sampling, Contaminant Screening Study, Libby Asbestos Site, Operable Unit 4, (December 1, 2003)

Requester: Terry Crowell Title: Sample Coordinator
Company: CDM Date: 01/27/04

Description of Modification: The target analytical sensitivity of 0.0001 structures per cubic centimeter (S/cc) for personal and stationary air samples will be modified to include a Not to Exceed Grid Opening (GO) count of 50 GOs. If a sensitivity of 0.0001 S/cc cannot be reached within 50 GOs, the lab will count only until a target analytical sensitivity of 0.0002 S/cc is reached, or until they reach 50 GOs, whichever comes first. That is, if an analytical sensitivity 0.0002 S/cc is reached within 47 GOs, the lab will stop counting after 47 GOs have been read.

Field logbook and page number modification is documented on: 1-00011; page 44

Reason for modification: Due to the inordinate amount of GOs that may be required to be read in order to reach the analytical sensitivity listed in the SAP Addendum for air samples, a target analytical sensitivity is established as described in the Description of Modification. The target analytical sensitivity will not compromise the air data; the air data will be usable for its intended purpose as stated in the SAP Addendum.

Duration of Modification (circle one):

Temporary Date(s): _____
Resident address(es): _____
_____

- If appropriate, attach a list of all applicable Index Identification numbers.

Permanent (complete *Proposed Modification Section*) *Effective Date:* January 9, 2004

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable): Section 4 – Laboratory Analysis and Requirements, subsection 4.2 – Sensitivity Limits, will be modified to include a Not to Exceed GO count of 50 GOs for air samples.

Technical Review and Approval: _____ Date:_____
(Volpe Project Manager or designate)

EPA Review and Approval: _____ Date:_____
(USEPA RPM or designate)

Logbook 1-00011
Terry Crowell - Sample Coordinator
Libby Asbestos Project
USDOT/Volpe Center

44

1/28/04 During discussions between M. Raney (Volpe Center) and the EMSL Mobile Asbestos Lab, it was decided that for the Post Clean-Up Evaluation personal and stationary air samples, a target analytical sensitivity (AS) with a Not to Exceed Grid Opening (GO) count of 50 would be implemented. This is to limit the time required to read samples in order to reach the AS specified in the Post Clean-Up Evaluation Sampling and Analysis Plan. In addition, if the target AS of 0.0001 S/cc (Libby Amphibole) is not reached within 50 GOs, a secondary target AS of 0.0002 S/cc will be achieved, whichever comes first. These changes are documented in 2 emails from M. Raney to EMSL, which are attached. Requested by A. Autio (Com) to write up the modification request form to the Post Clean-Up Evaluation sampling and Analysis Plan on 1/23/04. Modification Request LFO-000078 sent to Volpe for review and approval on 1/28/04.

1/28/04

Terry Crowell

Crowell, Terry

From: EMSL Mobile Lab - Asbestos [mobileasbestoslab@emsl.com]
Sent: Thursday, January 22, 2004 9:11 AM
To: Crowell, Terry
Subject: Fw: Clarification

----- Original Message -----
From: "Raney, Mark" <RANEY@VOLPE.DOT.GOV>
To: "'EMSL Mobile Lab - Asbestos'" <mobileasbestoslab@emsl.com>
Cc: "'Autio, Anni'" <autioah@cdm.com>
Sent: Friday, January 09, 2004 1:43 PM
Subject: RE: Clarification

> NO.
>
> Max GOs = 50
>
> 1st Target Sensitivity = 0.0001
> 2nd Target Sensitivity = 0.0002 (i.e., if you reach a sensitivity of
0.0002 within 47GOs, stop)
> If you can't reach 0.0002 within 50 GOs Stop at 50.
>
> Mark.
>
>
> -----Original Message-----
> From: EMSL Mobile Lab - Asbestos [mailto:mobileasbestoslab@emsl.com]
> Sent: Friday, January 09, 2004 3:37 PM
> To: Mark Raney
> Subject: Clarification
>
>
> Mark,
>
> In re-reading your email, I have a question. If I cannot reach 0.0001
S/cc
> in 50 GO's, I then aim for 0.0002 S/cc or 50 GO's. Am I correct in
> the assumption that we are talking about an additional 50 GO's to
> reach 0.0002 S/cc (that is a max of 100 GO's for any sample)?
>
> EMSL Mobile Asbestos Lab
> 107 W 4th St.
> Libby, MT 59923
> PH: (406) 293-9066
> FAX: (406) 293-7016
> http://www.emsl.com

Crowell, Terry

[redacted]m: EMSL Mobile Lab - Asbestos [mobileasbestoslab@emsl.com]
Sent: Thursday, January 22, 2004 9:11 AM
To: Crowell, Terry
Subject: Fw: Grid Openings Required, CE Samples

----- Original Message -----
From: "Raney, Mark" <RANEY@VOLPE.DOT.GOV>
To: "'EMSL Mobile Lab - Asbestos'" <mobileasbestoslab@emsl.com>; "Anni Autio" <autioah@cdm.com>; "Raney, Mark" <RANEY@VOLPE.DOT.GOV>; "Mary Goldade" <goldade.mary@EPAmail.epa.gov>; "Bill Brattin" <brattin@syrres.com>
Cc: "Rob DeMalo" <rdemalo@emsl.com>; "Charlie LaCerra" <clacerra@emsl.com>; "Kim Carr" <kcarr@emsl.com>
Sent: Friday, January 09, 2004 1:06 PM
Subject: RE: Grid Openings Required, CE Samples

> Anni,
>
> Based on Ron's email, past discussions, and a conversation I had with
> Bill
today, effective immediately the following rules should be followed regarding the Clean-up Evaluation Samples (CE).
>
> The CE target sensitivity of 0.0001 S/cc for all air samples, should
> be
[redacted]dified to incorporate a Not to Exceed GO count of 50 GOs. If a sensitivity of 0.0001 [redacted]c cannot be reached within 50 GOs the lab should count only until a target sensitivity of 0.0002 S/cc is reached or until they reach 50 GOs (which ever comes first).
>
> Also, a MOD will need to be prepared to document this change.
>
> Let me know if you have any questions.
>
>
> Mark.
>
> Mark Raney
> Environmental Engineer
>
> US DOT / Volpe Center
> Environmental Engineering Division, DTS-33
> phone: 617-494-2377
> cell: 617-694-8223
> fax: 617-494-2789
> raney@volpe.dot.gov
>
>
> -----Original Message-----
> From: EMSL Mobile Lab - Asbestos [mailto:mobileasbestoslab@emsl.com]
> Sent: Wednesday, January 07, 2004 7:02 PM
> To: Anni Autio; Mark Raney; Mary Goldade; Bill Brattin
> Cc: Rob DeMalo; Charlie LaCerra; Kim Carr
> Subject: Grid Openings Required, CE Samples
>
[redacted]As requested, here is an expanded breakdown of the CE samples
> currently in house with the required number of grid openings at
> different analytical sensitivities. I've made some approximations, so
> one or two of the
numbers

> may be off by a grid opening.
>
> R.

> EMSL Mobile Asbestos Lab
> 107 W 4th St.
> Libby, MT 59923
> PH: (406) 293-9066
> FAX: (406) 293-7016
> http://www.emsl.com

Record of Modification

to the

Libby Sampling and Quality Assurance Project Plan

Field Activities

LFO-000074

Instructions to Requester: **Fax to contacts at bottom of form for review and approval.**
File approved copy with Data Manager at the Libby Field Office (LFO).
Data Manager will maintain legible copies in a binder that can be accessed by LFO personnel.

Project QAPP (circle one): Phase I (approved 4/00) Phase II (approved 2/01)
Removal Action (approved 7/00) Contaminant Screening Study (approved 5/02)
Other (Title and approval date): Post Clean Up Evaluation SAP (11/03)

SOP (Number and Revision No.): NA

Other Document (Title, Number/Revision): NA

Requester: Dee Warren Title: RI Field Team Leader
Company: CDM Date: 11/20/03

Description of Modification: Change analysis on all samples collected under this SAP to AHERA.

Field logbook and page number modification is documented on: NA – documented in e-mail from EPA RPM

Reason for modification: ISO data is not required to collect the required data for risk assessment and evaluation, so all samples will be analyzed using AHERA methods.

Duration of Modification (circle one):

Temporary Date(s):
Resident address(es):

- If appropriate, attach a list of all applicable Index Identification numbers.

Permanent (complete Proposed Modification Section) Effective Date: 11/20/03

Proposed Modification to SQAPP (attach additional sheets if necessary; state section and page numbers of SQAPP when applicable): Section 4.1 page 4-1 Analytical Methods: All air and dust samples collected as part of the post clean-up evaluation will be analyzed by TEM according to the AHERA method. Dust samples will be prepared using ASTM 5755.

Technical Review and Approval: _____ Date: _____
(Volpe Project Manager or designate)

EPA Review and Approval: _____ Date: _____
(USEPA RPM or designate)